PLEASE NOTE: THERE WAS AN ERROR IN THIS FAI AND IT HAS NOW BEEN SUPERSEDED.
PLEASE SEE THE FAI DATED 26 JUNE 2026 [2026] FAI 33

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SHERIFFDOM OF GRAMPIAN, HIGHLAND AND ISLANDS

[2026] FAI 32

ELG-B125-25

DETERMINATION

BY

SHERIFF DAVID B HARVIE

UNDER THE INQUIRIES INTO FATAL ACCIDENTS AND SUDDEN DEATHS ETC (SCOTLAND) ACT 2016

into the death of

NORMAN MACKENZIE

Elgin, 26 June 2026

Determination

The Sheriff, having considered the information represented at the inquiry, determines in terms of the Inquiries into Fatal Accidents and Sudden Deaths etc (Scotland) Act 2016, (hereinafter referred to as "the 2016 Act"):

In terms of section 26(2)(a) of the 2016 Act (when and where the death occurred)

Norman Mackenzie's life was pronounced extinct at 1924 hours on 21 September 2024 at Aberdeen Royal Infirmary.

In terms of section 26(2)(b) of the 2016 Act (when and where any accident resulting in the death occurred)

The accident resulting in the death took place at around 1100 hours on 17 September 2024 at Darnaway Castle, Moray Estate, Elgin.

In terms of section 26(2)(c) of the 2016 Act (the cause of causes of the death)

The causes of death of the said Norman Mackenzie were:

1a. Multi organ failure

1b. Septic shock

1c. Necrotising fasciitis

2. Non-insulin dependent diabetes mellitus

In terms of section 26(2)(d) of the 2016 Act (the cause or causes of any accident resulting in the death)

The cause of the accident was a fall into a sunken flower bed while descending a step ladder, whereby a bamboo cane penetrated Mr Mackenzie's body which caused injury and later death.

In terms of section 26(2)(e) of the 2016 Act (any precautions which (i) could reasonably have been taken and (ii) had they been taken, might realistically have resulted in death, or any accident resulting in death, being avoided)

The use of a henchman platform ladder, suitably positioned on stable ground away from the sunken flower bed, might realistically have resulted in the accident resulting in death being avoided.

There was no clarity as to who Mr Mackenzie's supervisor was. He was subject to little or no supervision. Mr Mackenzie had been conducting the hedge cutting task for several days. A basic system of monitoring would have identified that Mr Mackenzie was consistently using vibrating machinery when he should not have been and was not using the henchman platform ladder for any tasks involving work at height. Adequate supervision might reasonably have resulted in the accident resulting in death being avoided.

Moray Estates Development Limited having instructed that Mr Mackenzie provide training to other employees, there was an absence of a clear agreed plan regarding how said training was to be delivered by Mr Mackenzie, given the known constraints of the medical advice. Given that medical advice, Mr Mackenzie should not have been expected to conduct any hedge cutting personally, far less at height. Had such a plan been in place the accident resulting in Mr Mackenzie's death might realistically have been avoided.

In terms of section 26(2)(f) of the 2016 Act (any defects in the system of working which contributed to the death or the accident resulting in the death)

The absence of structured supervision of Mr Mackenzie's work was not an isolated lapse, but formed part of an accepted practice whereby Mr Mackenzie was not subject to any oversight or verification of compliance with Moray Estates health and safety procedures, amounting to a defect in the system of working which contributed to the accident resulting in death.

In terms of section 26(2)(g) of the 2016 Act (any other facts which are relevant to the circumstances of the death)

Mr Mackenzie having suffered a blunt, penetrating and dirty injury, he could reasonably have been prescribed antibiotics under the Grampian Health Board necrotising fasciitis protocol.

Following evidence heard during the first day of the Inquiry, Grampian Health Board recognised that the way in which discussions at its Morbidity and Mortality meetings were recorded was not adequate and has since adopted the Royal College of Surgeons recommended system. The absence of an adequate record had an impact on the extent of further evidence required at the Inquiry to establish the circumstances of Mr Mackenzie's death.

The target time for surgery was not met due to competing emergencies. There was no evidence at the Inquiry that that delay caused or contributed to Mr Mackenzie's death. However, following evidence led at the second day of the Inquiry, the Board has further

amended its approach to record keeping at Morbidity and Mortality meetings to ensure that a surgical target time not being met would now be recorded as a system failure.

Recommendations

In terms of section 26(1)(b) of the 2016 Act (recommendations (if any) as to (a) the taking of reasonable precautions, (b) the making of improvements to any system of working, (c) the introduction of a safe system of working, (d) the taking of any other steps, which might realistically prevent other deaths in similar circumstances)

Since Mr Mackenzie's death, Moray Estates Development Limited has reviewed and formalised its supervision and reporting structure, making it clear that the individual now employed in Mr Mackenzie's role is under the Estate Forestry Department. Moray Estates Development Limited has recognised that the experience and/or seniority of workers is not a substitute for structured oversight.

Moray Estates Development Limited has removed all canes from the sunken gardens and flower beds.

Moray Estates Development Limited has reinforced to staff that all incidents or near misses are to be reported so that they can be fully investigated.

Moray Estates Development Limited has reviewed the accident circumstances, the Risk Assessments and the Method Statements with its Health and Safety Consultants, Greens of Haddington.

Given those steps, the court makes no recommendations.

NOTE

Legal framework

[1] This inquiry was held in terms of section 1 of the 2016 Act and was governed by the Act of Sederunt (Fatal Accident Inquiry Rules) 2017 (hereinafter referred to as "the 2017 Rules"). This fatal accident inquiry was presented by the Crown, by a Notice under section 17(3) of the 2016 Act, as a mandatory inquiry in terms of section 2(3) of the 2016 Act, namely that Mr Mackenzie died as a result of an accident in the course of his employment or occupation.

[2] The purpose of this inquiry as set out in section 3 of the 2016 Act, is to establish the circumstances of the death and to consider what steps, if any, might be taken to prevent other deaths in similar circumstances. It is not intended to establish liability, either criminal or civil. An inquiry is an exercise in fact finding, not fault finding. An inquiry is an inquisitorial process. The Crown, in the form of the Procurator Fiscal, represents the public interest.

[3] In terms of section 26 of the 2016 Act the inquiry must determine certain matters, namely where and when the death occurred, when any accident resulting in the death occurred, the cause or causes of death, the cause or causes of any accident resulting in the death, any precautions which could reasonably have been taken and might realistically have avoided the death or any accident resulting in the death, any defects in any system of working which contributed to the death, and any other factors relevant to the circumstances of the death. It is open to me to make recommendations in relation to the matters set out in subsection 4 of section 1 of the 2016 Act.

[4] In submissions the courts attention was drawn to caselaw relating to the appropriate interpretation of the 2016 Act, notably

Duncan v *Lord Advocate* 2025 SLT 1199,

John Yuill and Lamara Bell [2024] FAI 18

Inquiry into the deaths of Katie Allan and William Brown [2025] FAI 6, 2025 G.W.D 15-137, [2025] 1 WLUK 631

Inquiry into the death of James McAlpine, (Glasgow, 17 January 1986)

Parties were consistent in their interpretation of the cases and their application to this Inquiry, with which the court agrees.

Introduction

[5] This inquiry was held into the death of Norman Mackenzie, hereinafter referred to as Mr Mackenzie, who died aged68, having been born on 8 January 1956. He was brought up in the Forres area. He is survived by his wife, Mrs Catriona Mackenzie, whom he married in 1974. The couple had two children, Stuart, and Eilidh.

[6] Following a year in the Merchant navy, Mr Mackenzie began working in agriculture. He had various jobs with local estates and the forestry commission, including working for a year in Devon. On returning to the Forres area, Mr Mackenzie started a job with Moray Estates. Mr Mackenzie was employed as a gardener and grounds keeper by Moray Estates Developments Limited for over forty years.

[7] Mr Mackenzie's duties at the estate included grass cutting, tree pruning and hedge trimming for the whole estate. Mr Mackenzie was highly regarded by his

employers, who described him as a very good worker, great with younger workers, diligent and very professional.

[8] Mr Mackenzie had never had any major operations or been in hospital prior to September 2024. He had been diagnosed with type 2 diabetes and took prescribed medication. Mr Mackenzie suffered from Hand Arm Vibration Syndrome. He had Carpal Tunnel Syndrome in both hands. He was considered unfit to work with vibration exposure.

[9] Mr Mackenzie died at 1924 on 21 September 2024 at Aberdeen Royal Infirmary, having fallen from a ladder at around 1100 on 17 September 2024 whilst working at Darnaway Castle, Moray Estate, Elgin.

[10] At the outset, I wish to express my sincere condolences to Mr Mackenzie's family for their loss in such tragic circumstances.

Procedure

[11] Ms Sun, procurator fiscal depute, represented the Crown. Mr Dundas, counsel, instructed by Ms Waseem, solicitor, represented NHS Grampian. Ms Clark, solicitor, represented Mr Mackenzie's employer, Moray Estates Developments Ltd. Whilst no other parties were represented, Mrs Mackenzie and her solicitor, Mr Brown, attended the Inquiry throughout.

[12] Preliminary hearings were held by Webex at Elgin Sheriff Court on 14 and 28 August, 2 and 19 September 2025, there having been further work necessary

regarding both a meaningful draft joint minute and productions, the Crown's initial position having been that the Inquiry could proceed without the need for oral evidence.

[13] The inquiry proceeded in person at Elgin Sheriff Court with evidence over two days on 22 September and 2 December 2025. Parties lodged a detailed Joint Minute.

[14] Statements appended to the Joint Minute were admitted into evidence, without needing to be adopted by the author in oral evidence:

Grampian Health Board Production 3, a statement prepared by Mr James Donaldson, Consultant Urological Surgeon dated 17 September 2025.

Grampian Health Board Production 4, a statement prepared by Mr Robert Mason, Consultant Urological Surgeon.

Grampian Health Board Production 5, a statement prepared by Mr Craig Parnaby, Consultant General Surgeon.

[15] The Crown led evidence from –

a) Ben McManus, Apprentice Forrester, Moray Estates

b) Gavin Tunnard, A&E Consultant, Elgin

c) James Donaldson, Consultant Surgeon Aberdeen

d) Andrew Howard, Managing Director, Moray Estates

[16] NHS Grampian led evidence from –

a) Carol Ann McCorgray, Physician Associate, Aberdeen

b) Robert Mason, Consultant Surgeon, Aberdeen

[17] Moray Estates Developments Ltd led evidence from –

a) Craig McNaught, Clerk of Works, Moray Estates

b) Benjamin Clinch, Woodlands Manager, Moray Estates

[18] Parties lodged written submissions. Those submissions invited the Court to make no findings under sections 26(2)(e) to (g) of the Act. Oral submissions were heard on 23 March 2026, the original date of 16 February 2026 having to be adjourned due to the unavoidable unavailability of Counsel for Grampian Health Board. Following various representations made during oral submissions, which differed from those submitted in writing, notably by the Crown and Moray Estates Development Limited, all parties were ordered to submit supplementary written submissions by 30 March 2026.

The Facts

[1] Mr Norman Mackenzie (hereinafter referred to as "Mr Mackenzie") was born on 8 January 1956.

[2] Mr Mackenzie died on 21 September 2024 at 7.24pm at Aberdeen Royal Infirmary. He was 68 years of age when he died.

[3] Mr Mackenzie's death was reported to the Procurator Fiscal on 25 September 2024.

[4] At the time of his death Mr Mackenzie was employed by Moray Estates Developments Limited at Darnaway Castle as a gardener and grounds keeper. He began working at Moray Estate in August 1983. His main work duties were the upkeep of the whole Moray estate including cutting all the verges for the private road into the

estate, looking after the vegetables, removing the leaves in the autumn, grass cutting, tree pruning and hedge trimming.

[5] Mr Mackenzie was provided with the Staff Safety Manual which he confirmed he had read and fully understood his health and safety responsibilities on 6 November 2013. The 2013 manual was updated following the Mr Howard's discussions with Greens of Haddington during a visit in August 2022.

[6] He was asked to provide input on the updated manual in January 2023. The manual was ultimately finalised in 2024. Mr Mackenzie was furnished with a hard copy of the 2024 manual. A copy of the 2024 manual was seized from his workshop in the aftermath of the incident.

[7] Among other work-related qualifications, he achieved his First Aid at Work Requalification approved by the First Aid Industry Body on 17 November 2020. This certificate was valid until 17 November 2023. He was also awarded various City & Guilds NPTC Level 3 Awards in relation to the use of a Chainsaw on 11 June 2015.

[8] Mr Mackenzie suffered from Hand Arm Vibration Syndrome. A Hand Arm Vibration Surveillance Report was completed by Dr Brian Fitzsimons, c/o Granite Occupational Health Ltd dated 30 April 2024. At the point of reporting, he had Carpal Tunnel Syndrome in both hands. He was considered unfit to work with vibration exposure. Moray Estates Developments Limited were aware of this diagnosis.

[9] For lone working Moray Estates Developments Limited have a two-hour system where workers check in to ensure they have not had an accident or taken ill. If a lone worker is not heard from in that two hours Moray Estates ensures that the lone worker

is okay. Mr Mackenzie had the best record for the lone working check in.
Mr Mackenzie was not lone working at the time of the incident. He was working with Mr McManus, a member of the Woodlands Team.

[10] Mr Mackenzie was provided with a henchman for cutting the topiary hedges. There was a manual available to Mr Mackenzie with instructions on how to operate this piece of equipment. The henchman, a hi-step platform ladder, is designed to be used on rough terrain and for cutting hedges.

[11] A long reach hedge cutter is specifically used for the task Mr Mackenzie was conducting on 17 September 2024, because it gives the user a longer reach from the ground or at a low height. The long reach cutter cannot be operated using one hand. It has a dead man's throttle where once the operating hand lets go of the throttle the engine cuts out. The second hand is used for guiding and supporting from the handle of the cutter. Given that Mr Mackenzie was considered unfit to work with vibration exposure, he should not have been using this equipment.

[12] On 17 September 2024 Mr Mackenzie was working alongside Ben McManus.
Mr McManus worked at Darnaway Castle Estate as an apprentice forester.
Mr McManus had been in this role for 1 year when the incident occurred. Mr McManus' role involved working around the estate felling trees, marking trees and planting trees. Mr McManus helped Mr Mackenzie with his ground keeping work when he needed a hand with a job. Given Mr Mackenzie's diagnosis, he was to train Mr McManus to trim the hedges at the estate. Mr McManus was aware that Mr Mackenzie was considered unfit to work with vibrating equipment.

[13] There is no documentation capturing the Moray Estate instruction to Mr Mackenzie that he was to train Mr McManus, nor any evidence as to how the training was to be delivered considering the constraints on equipment use imposed by Mr Mackenzie's diagnosis.

[14] Mr Mackenzie continued to use the long reach hedge cutter. Mr Howard was aware of that fact.

[15] Mr Mackenzie did all the work at height whilst training Mr McManus. Mr McManus did not witness Mr Mackenzie ever using the henchman, he always used the step ladder when working at height.

[16] Mr Mackenzie's line management and supervision were unclear and inadequate. He was subject to little, if any, oversight. The Moray Estate documentation states that the managing director, Mr Howard, was Mr Mackenzie's line manager. In practice, Mr Mackenzie was not supervised by Mr Howard.

[17] On 17 September 2024 at the sunken gardens, Darnaway Castle, Darnaway Estate, Forres, Moray Mr McManus was working with Mr Mackenzie cutting the topiary hedges at around 1100.

[18] Mr Mackenzie was wearing steel toe cap boots, gloves, outdoor work trousers, and top and ear defenders that have a visor on.

[19] Mr Mackenzie was using the long reach hedge cutter whilst standing on a step ladder. Mr McManus was stabilising the ladder using a hand and foot. The step ladder was not appropriate for the task.

[20] The step ladder had been placed on uneven ground close to a 600mm drop into a sunken garden area containing plants and bamboo canes. The placement of the step ladder was unsafe.

[21] A henchman platform ladder suitable for the task, if appropriately located and erected, was in a trailer nearby.

[22] Mr Mackenzie and Mr McManus had no discussion regarding a dynamic risk assessment.

[23] The Moray Estate Staff Safety Manual contains no specific information regarding working in the Eastern end of the Darnaway Castle, adjacent to the sunken gardens area of the estate. It does state that ladders are only safe when they rest on a firm and level surface. It further states that hedge trimming should be done from suitable scaffold such as a henchman platform when work at height is required.

[24] At around 1100 hours on 17 September 2024, Mr Mackenzie had completed the finishing touches on a topiary hedge using the long reach hedge cutter whilst on the step ladder. As he descended, Mr Mackenzie misjudged the bottom step and stumbled backwards, falling into the sunken garden area.

[25] As he fell, a bamboo cane in the sunken garden penetrated his clothing and skin at the groin area.

[26] Mr Mackenzie removed the cane, sat down for five minutes, stating that he felt sick, before resuming work until lunch time, at which point he went home.

[27] Around lunch time, same day, Mrs Catriona Mackenzie returned home and was told by Mr MacKenzie that he had an accident while working at the sunken gardens of

the Darnaway Castle estate. Mr Mackenzie advised that he fell off a wall and a bamboo cane type pole went in between his legs. He further advised that the cane had gone through his clothes, scratched his groin, and ended up beside his stomach but between his skin and his clothing. Mr Mackenzie refused to go to hospital and returned to work in the afternoon.

[28] Mr Mackenzie finished work early that day and was home by 1530. At that time, he was feeling sick and went to bed.

[29] Mr Mackenzie stayed in bed throughout the 18 September 2024 and did not go to work due to not feeling well. On the morning of 19 September 2024 Mr Mackenzie found his genitals were swollen.

[30] Mr Mackenzie attended the Accident and Emergency Department at Doctor Gray's Hospital (DGH) in Elgin on the morning of 19 September 2024.

[31] Mr Mackenzie was reviewed at around 1008 in the emergency department. It was noted that Mr Mackenzie had impaled himself after falling on a garden cane two days previously. He reported an entry wound to his right scrotum. He was noted as feeling flushed and unwell. On examination it was noted that Mr Mackenzie was suffering from scrotal swelling with a right sided entry point. His lower abdomen was tender. Gas was not felt on palpation. The recorded impression was an infected wound tract. A CT scan was arranged to assess for any foreign body or peritoneal breach. IV antibiotics were started together with revaxis and tetanus immunoglobulin. It was noted that he "will need surgical washout."

[32] At around 1020 blood samples were collected from Mr Mackenzie for testing.

[33] Mr Mackenzie was reviewed at around 1042 in the emergency department. It was noted that his past medical history included type 2 diabetes mellitus. It was noted that the results of the CT scan should be awaited and then a discussion would take place with urology for "?washout" and "?IV management." It was noted that blood tests were awaited at that time.

[34] Mr Mackenzie underwent a CT scan at around 1103 on 19 September 2024. The scan was reported by Dr Mirza, the radiology registrar and verified by Mr Brodie, Consultant Radiologist. The CT scan was reported as follows: Report: There is a large soft tissue swelling over the mons pubis extending inferiorly, at the level of the pubic rami, with subcutaneous fat stranding and oedema. There is gas and fluid which extends to the right side of midline alongside the base of penis but is separate to the right inguinal canal, the structures of which appear normal. There are very small bilateral hydroceles but the testes appear grossly normal at CT. Superiorly the gas and fluid extends in a linear fashion in the subcutaneous tissues in and into the right rectus abdominous muscle and adjacent abdominal wall fat abutting the superficial peritoneum. At the uppermost level this is approximately 5cm caudad to the umbilicus. The right rectus is slightly thickened but there is no organised haematoma evident. There is no extension of gas into the peritoneal cavity although a very small volume of lower right para colic free fluid is noted. Some thickening in the anterior urinary bladder wall with mild adjacent fat stranding. No adjacent free fluid or collection to suggest full-thickness perforation of the urinary bladder. Normal appearances of the liver, spleen, pancreas, adrenals and the distended but thin-walled gallbladder. Both

kidneys are of normal appearance, with a few simple cortical cysts noted bilaterally, the largest measuring approximately 19 x 18 mm in the left mid pole on axial plane. The large and small bowel are both unremarkable in appearance. No lymphadenopathy is identified. The vascular structures are normal. Mild respiratory motion artefact. The lung bases are otherwise clear. No focal bony lesion. Moderate osteophytosis noted throughout the lumbar spine Conclusion: Gas and fluid extending from the mons pubis region into the right para median rectus sheath as described with some intra-abdominal stranding and limited free fluid as described. Mild thickening of the anterior urinary bladder wall but no evidence full-thickness injury. Scrotal and perineal oedema but no evident intrascrotal collection. No gross residual foreign body but note that organic foreign material in the presence of such extensive gas cannot be excluded.

[35] Mr Mackenzie's blood tests were reported at around 1127. Amongst other things, they showed the following: White Blood Cell count ("WBC"): 18.6.7 C-Reactive Protein ("CRP"): 264.8

[36] Mr Mackenzie was reviewed by Miss Battacharya (an ST3 in General Surgery) at around 1234. At that time Mr Mackenzie was clinically stable. Miss Battacharya discussed Mr Mackenzie's presentation with Mr Krishnan (an ST5 in Urology). It was noted that Mr Krishnan agreed that Mr Mackenzie would require washout and debridement surgery and that Aberdeen Royal Infirmary ("ARI") was the best location for post-operative care. Mr Krishnan discussed Mr Mackenzie's presentation with Mr Aslam, who was the on-call consultant urologist. Following discussions, it was agreed that Mr Mackenzie would be transferred, whilst he was stable, to ARI for further

management under the surgical team. It was noted at that time that the worry of the team at ARI was whether Mr Mackenzie's condition was developing into necrotising fasciitis. The recorded plan was: (i) the continuation of IV antibiotics (augmentin having already been given to Mr Mackenzie); (ii) the administration of a tetanus injection; (iii) Mr Mackenzie was to remain NBM (nil by mouth) and be given IV fluids; (iv) he was to be provided with analgesia; and (v) he was to be transferred to ward 209 at ARI under the care of Mr Donaldson.

[37] The Scottish Ambulance Service collected Mr Mackenzie for transfer at around 1558. Mr Mackenzie was transferred by ambulance from Dr Gray's Hospital to ward 209 at ARI under the care of Mr Donaldson, Consultant Urological Surgeon.

[38] At around 1741 on 19 September 2024 blood samples were collected from Mr Mackenzie for testing.

[39] At around 1815 on 19 September 2024 Mr Mackenzie was reviewed by Mr James Donaldson, Consultant Urological Surgeon together with Miss Tripathi, the urology registrar. At the time of review Mr Mackenzie's National Early Warning Score ("NEWS") was one. On examination his abdomen was soft with some suprapubic tenderness. It was noted that erythema was spreading over the mons pubis region. No crepitation was felt. It was noted that Mr Mackenzie's scrotum and penis were a bit oedematous. Mr Mackenzie's testicles were non-tender on palpation. It was noted that he was suffering from a 2cm laceration at the base of his right hemiscrotum. A wound swab was used to sweep the wound. The swab entered the wound for approximately 8cm within the superficial tissue. A rectal examination was performed. No blood

staining was noted and Mr Mackenzie's prostate was benign. Following examination, Mr Donaldson's noted impression was surgical emphysema and wound infection. No clinical signs of necrotising fasciitis were found at that stage. Mr Donaldson decided that Mr Mackenzie would be managed conservatively (i.e. non-surgically).

Mr Mackenzie was started on broad spectrum antibiotics (co-amoxiclav (which had already been started at DGH), metronidazole and gentamicin). The extent of erythema was marked using a skin marker pen to facilitate accurate and regular monitoring of the extent of erythema and allow easy identification of progression in the clinical signs of infection. Further blood tests were requested (including repeat lactate, HbA1c and GS (Group and Save)). Mr Donaldson's management plan also included a PVR (post void residual bladder scan), urine dip and urine culture. A flexible (local anaesthetic) cystoscopy was provisionally planned for 6-8 weeks thereafter, to facilitate an urgent clinical review by a urologist as well as a telescope examination of the bladder and urethra (cystoscopy) to ensure that there was no residual problem with Mr Mackenzie's bladder or urethra. The wound swab was sent for culture and sensitivity.

[40] Mr Mackenzie's blood tests were reported at around 1956. Amongst other things, they showed the following: a. WBC: 17.8 b. CRP: 288.

[41] Mr Mackenzie was reviewed by nursing staff at around 0001 on 20 September 2024. His National Early Warning Score ("NEWS") was noted to have been one. It was noted that he had been alert and orientated. He had not been suffering from pain or nausea at that time. He was settled and sleeping at the time of review.

[42] At around 0123 on 20 September 2024 Mr Mackenzie's temperature spiked to 38.1. Paracetamol was administered to him.

[43] At around 0800 on 20 September 2024 Mr Donaldson handed Mr Mackenzie's care over to Mr Mason, Consultant Urological Surgeon. Mr Donaldson and Mr Mason discussed Mr Mackenzie's presentation and treatment at the handover meeting prior to jointly reviewing him on the ward round.

[44] At around 0838 hours on 20 September 2024 Mr Mackenzie was reviewed by Mr Robert Mason, Consultant Urological Surgeon, Mr Donaldson, Consultant Urological Surgeon and Miss Tripathi and Mr Salik, the urology registrars. At the time of review Mr Mackenzie's NEWS was 2 (his oxygen saturations were 95% on air and his pulse was 95bpm). It was noted that Mr Mackenzie was lying in bed, felt washed out and reported passing urine without haematuria (blood in urine). On examination, the skin flap around the entry site was inflamed in keeping with a combination of haematoma (a blood clot) and cellulitis (superficial skin infection). There was no evidence of devitalised or necrotic skin. There was no evidence of skin crepitus (which signifies gas, from infection, in the deeper tissues). There had been no extension of inflammation beyond the line drawn the day before to indicate the extent of tissue swelling. Amongst other things, the recorded plan was to undertake an urgent CT cystogram and catheterisation.

[45] At around 1028 on 20 September 2024 blood samples were collected from Mr Mackenzie for testing.

[46] At around 1037 on 20 September 2024 Mr Mackenzie's lactate levels were reported as 1.5mmol/L.

[47] At around 1217 on 20 September 2024 Mr Mackenzie was reviewed by nursing staff. He was alert and orientated. It was noted that Mr Mackenzie continued to fast. He was catheterised and a small amount of urine was draining. His NEWS was two. His oxygen saturations were noted to be 94%. His heart rate was noted to be ninety-two. MRSA swabs were taken and sent to the laboratory for testing.

[48] At around 1406 on 20 September 2024 Mr Mackenzie's bloods were reported as, amongst other things, showing: a. CRP: 312.

[49] At around 1606 on 20 September 2024 Mr Mackenzie's bloods were reported as, amongst other things, showing: a. WBC: 31.3.

[50] At around 1638 on 20 September 2024 Mr Mackenzie underwent a CT scan which was subsequently reported as showing: CT abdomen/pelvis with IV and intravesical contrast findings: Excellent opacification of the urinary bladder, with urinary catheter correctly sited, and no evidence of intraperitoneal or extraperitoneal leak. There is new small volume of simple fluid in the right paracolic gutter and upper abdomen. Worsening soft tissue oedema in the lower anterior abdominal wall. Increased volume of gas within the rectus sheath and medial to the right inguinoscrotal canal. Very mild bilateral basal atelectasis. Stable bones. No other significant interval change compared to yesterday's CT examination. Opinion: No bladder leak. Increasing volume of gas in the injury tract. I note increasing inflammatory markers, in the case of increasing gas consider infection with gas forming organisms.

[51] At around 1646 on 20 September 2024 Mr Mackenzie's lactate levels were reported as 5.8mmol/L.

[52] At 1717 on 20 September 2024 Mr Mackenzie was reviewed by Mr Mason and Mr Salik. Mr Mackenzie was noted not to be feeling well. It was noted that his blood markers had deteriorated. His observations were stable, but he was now suffering from tachycardia (raised heart rate). His abdomen was soft on examination, but tender in the suprapubic area. It was noted that there had been no extension of bruising since the morning review. His oedema was noted to be slightly worse. It was noted that there was no worsening of Mr Mackenzie's perineum and no necrotic patch or ulcers other than the wound at the point of entry of the cane. It was noted that a CT cystogram had been undertaken, and the report was awaited, but on review of the imaging no obvious bladder injury had been identified. The recorded plan was to start the Sepsis 6 protocol and for Mr Mackenzie to be reviewed again by both urological and general surgery.

[53] At around 1720 on 20 September 2024 Mr Mackenzie was reviewed by Mr Mason, Consultant Urological Surgeon, Mr Parnaby, Consultant General Surgeon, and Mr Toe (ST3, urology). It was noted that Mr Mackenzie was feeling unwell. His NEWS was two. He was not suffering from a spike in temperature, but he was nauseous. It was noted that Mr Mackenzie's WBC was thirty-one; his CRP was 312; his eGFR was forty-one; his Hb was 190; and his lactate level was 5.8. On examination Mr Mackenzie was not short of breath. He was uncomfortable in bed. He was suffering from abdominal discomfort but denied tenderness. On examination Mr Mackenzie's abdomen was soft and mildly tender. It was noted that he was suffering from

significant scrotal swelling which was larger than it had been that morning. It was noted that the redness was not spreading beyond the previous marking. No crepitus was identified. The recorded impression was "sepsis secondary to FB infected wound." It was noted that, given the duration of wound infection and deterioration in the clinical picture, the plan was to undertake surgical exploration (in particular, bilateral scrotal exploration and debridement and a lower abdominal wall exploration). Mr Mackenzie was consented for surgery. The anaesthetic team was informed of the plan and contact was made with the HDU and ICU to inform them that they would require to review Mr Mackenzie after surgery.

[54] The target time for surgery was two hours, category B.

[55] At around 1821 on 20 September 2024 Mr Mackenzie was reviewed by the anaesthetic team. The following observations were noted: heart rate (109); blood pressure (140/80); oxygen saturations (94%); temperature (37.0). It was noted that surgery would be undertaken under general anaesthetic. Other emergency operations, which had already started, had to be completed before Mr Mackenzie could be taken to the emergency theatre.

[56] At around 2016 on 20 September 2024 Mr Mackenzie's lactate levels were reported as 4.7 mmol/L.

[57] At around 2017 on 20 September 2024 Mr Mackenzie's bloods were reported as, amongst other things, showing: a. WBC: 33.5.32 b. CRP: 259.33.

[58] Mr Mackenzie was taken to theatre at around 2200. The anaesthetic was administered at around 2210.

[59] At around 2305 Mr Mackenzie underwent surgery under the care of Mr Mason, Consultant Urological Surgeon and Mr Parnaby, Consultant General Surgeon. They were assisted by Mr Toe, the urology registrar and Mr Macleod, the general surgery registrar.

[60] The procedure was listed as "Exploration and Debridement of bilateral scrotal skin, penile skin + circumcision + bilateral inguinal skin + lower abdominal wall. Diagnostic laparotomy (lower midline)."

[61] Intraoperatively, signs of necrotising fasciitis were noted. It was noted that the necrotic area involved the lower anterior abdominal skin and bilateral inguinal skin extending to the rectus muscle and peritoneum. Both testicles and the penis were noted to be healthy. The track created by the injury was opened and a foreign body (which was noted as being "? torn Jean pants") measuring around 2x2cm was identified and removed. Skin at the scrotum and penis and lower abdominal wall below the umbilicus was removed as it was necrotic. The abdomen was opened via a lower midline incision. There was no sign of injury or infection of the bowel or abdominal contents. The abdomen was closed. The skin wounds were left open and dressings were applied.

[62] The post-operative plan was to transfer Mr Mackenzie to the intensive care unit. His airways were to be managed by the anaesthetic and ICU team. Antibiotics for necrotising fasciitis were to be continued. A plan was made to undertake a second look procedure 24-48 hours later to reassess Mr Mackenzie's condition and assess whether further debridement was necessary. Serous fluid and necrotic tissue were sent for "MC&S" (Microscopy, Culture and Sensitivity).

[63] At around 0131 on 21 September 2024 Mr Mackenzie was admitted to the ICU due to a high noradrenaline requirement. He was provided with level 3 care, which is for patients who require multi organ support. The recorded impression upon admission to the ICU was "sepsis – necrotising soft-tissue infection." It was noted that Mr Mackenzie had been prescribed antibiotics for necrotising fasciitis, and the plan was to continue with that treatment.

[64] At around 0432 on 21 September Mr Mackenzie's wounds were reviewed by the urology registrar. There was no leak of serous fluid noted.

[65] At around 0559 on 21 September 2024 nursing staff noted that Mr Mackenzie's noradrenaline requirements were increasing. A bolus of fluid was given, which Mr Mackenzie responded to.

[66] At around 0633 on 21 September 2024, it was noted that Mr Mackenzie remained acidotic. His noradrenaline requirements were increasing. Medical staff were informed. It was noted that the laboratory team had contacted the ICU team to inform them that Mr Mackenzie was suffering from stage 3 acute kidney injury.

[67] At around 0831 on 21 September 2024 Mr Mackenzie was reviewed by Dr Kelly. Dr Kelly noted that Mr Mackenzie was sedated and ventilated. Having reviewed Mr Mackenzie, Dr Kelly's recorded plan was to (i) repeat blood gases to check Mr Mackenzie's potassium levels following insulin-dextrose; (ii) insert a nasogastric tube; (iii) administer an actrapid infusion prior to starting IV hydrocortisone; (iv) continue noradrenaline, argipressin; (v) continue proprofol and alfentanil; and (vi)

continue antibiotics. It was noted that Mr Mackenzie may be returned to theatre either later that day or the following day.

[68] At around 0835 on 21 September 2024 Mr Mackenzie's blood gases were taken. Insulin/dextrose was administered. An ECG was undertaken, which it was noted medical staff had reviewed. It was noted that Mr Mackenzie was hyperglycaemic and that his blood pressure requirements were increasing. Vasopressin was added and a hydrocortisone loading dose was administered.

[69] At around 0928 on 21 September 2024 Mr Mackenzie was reviewed by Mr Salik, the urology registrar. It was noted that Mr Mackenzie was doing poorly. He was ventilated and on vasopressors. It was noted that Mr Mackenzie would continue to be managed under the ICU plan. Depending on his progress, it was noted that he may be returned to theatre for relook and further debridement surgery. Blood tests were to be repeated.

[70] At around 0952 on 21 September 2024 Mr Mackenzie was reviewed by Dr Kelly. Amongst other things, Dr Kelly's recorded plan was to continue antibiotics and commence actrapid infusion and nasogastric feeding.

[71] At around 1059 on 21 September 2024 Mr Mackenzie was reviewed by Mr Mason. Mr Mackenzie's wound was reviewed, and his condition was discussed with the ITU registrar. It was noted that Mr Mackenzie's family would be contacted that day and relook surgery would be planned.

[72] At around 1550 a retrospective note was completed by nursing staff outlining the care which had been provided to Mr Mackenzie that day. Amongst other things,

Mr Mackenzie had been treated with fluids to maintain blood pressure levels as he had been significantly hypotensive. He had been on CRRT (continuous renal replacement therapy). Actrapid infusion had been started but had been discontinued. It was noted that Mr Mackenzie's temperature had dropped and he had been given a "bear hugger" to maintain his temperature.

[73] At around 1846 on 21 September 2024 Mr Mackenzie was reviewed on the ward round. It was noted that Mr Mackenzie had been persistently hypotensive that day despite treatment. It was noted that Mr Mackenzie had been reviewed by the urology team and that he was to be taken to theatre the following day depending on his physiological parameters. If Mr Mackenzie became hypotensive, noradrenaline and vasopressin treatment was to be restarted. Mr Mackenzie was provided with an additional 500ml bolus of albumin. A bedside echocardiogram was to be undertaken. Calcium levels were to be monitored. Mr Mackenzie was continued on enhanced rates RRT and methylene blue infusion. At around 1910 on 21 September 2024 medical staff were called to Mr Mackenzie's bedside. The ICU Consultant, the ICU registrar, the ICU CDF, the ICU charge nurse and four members of the ICU nursing staff were present. Mr Mackenzie was hypotensive and becoming increasingly bradycardic (his heart rate was falling from 120 to 80 to 70). A defibrillator was obtained. Adrenaline was administered to Mr Mackenzie. CPR was commenced. Seven cycles of CPR were undertaken. However, Mr Mackenzie was asystole throughout the resuscitation efforts. After seven cycles of CPR, a multidisciplinary team decision was made to stop resuscitation efforts. Mr Mackenzie passed away at 1924. The impression recorded at

that time was that Mr Mackenzie had experienced overwhelming sepsis with shock and multiorgan failure. It was noted that Mr Mackenzie's death would be referred to the procurator fiscal as he had suffered from a work-related injury.

[74] A death certificate was issued by Dr AK Muhd Adiib PG Suhaimi.

[75] Mr Mackenzie's cause of death was certified as being:

> 1a Multi Organ Failure
>
> 1b Septic Shock
>
> 1c Necrotising Fasciitis
>
> 2 Non-Insulin Dependent Diabetes Mellitus

[76] Mr Mackenzie's case was discussed at Aberdeen Royal Infirmary's Urology Department monthly clinical governance meeting on 19 November 2024. The minute of the discussion states –

> "- Discussion regarding whether earlier intervention would have been of benefit.
>
> - No foul-smelling necrosis and no signs of necrotising fasciitis. Lactate 1.5 at presentation.
>
> - Outcome: As this was a dirty injury, further wide spectrum antibiotics should have been commenced and possibly earlier intervention may have been of benefit."

During the meeting there was a thorough discussion regarding the presentation of Mr Mackenzie and the evolving diagnosis of necrotising fasciitis which commonly has an insidious onset with little or no symptoms in the initial stages of the disease process. It was noted that two consultant urologists independently reviewed the patient within fifteen hours of admission to Aberdeen Royal Infirmary. Both did not think that

debridement was in Mr Mackenzie's interests at that stage. It was noted that Mr Mackenzie's deterioration led to a prompt diagnosis of necrotising fasciitis and prompt debridement but unfortunately Mr Mackenzie succumbed to this condition, which has a high mortality rate. The Minute did not accurately reflect the extent of the discussion or that it benefitted from information in relation to the torn jeans fragment which was only available in hindsight. The Minute of the meeting did not record that the target time for surgery was not met.

[77] A RIDDOR Report was submitted to the Health and Safety Executive on 23 September 2024. The RIDDOR Report Number was 9A10416810. The RIDDOR Report was completed by Mr Ben Clinch, Woodlands Manager at Moray Estates.

[78] The Health and Safety Executive have taken no further action following submission of the RIDDOR Report.

[79] Moray Estates Limited have removed all canes from the sunken gardens or any flower bed where someone would be above post incident.

[80] Moray Estates Limited have centralised their ladder checks with their Health and Safety Department every six months to ensure the ladders are in working order.

[81] Moray Estates Limited have reinforced to all staff that any small incident or near miss is reported so that it can be fully investigated.

[82] Moray Estates Limited have reviewed the accident circumstances and the Risk Assessments and Method Statements with their Health and Safety Consultants, Greens of Haddington.

The evidence

[83] Helpfully, parties agreed a lengthy and detailed joint minute, which evidence is reflected in many of the findings in fact, particularly in relation to the detail of the treatment provided to Mr Mackenzie at both Dr Gray's Hospital and thereafter at Aberdeen Royal Infirmary.

[84] Ben Jack McManus was the only eyewitness present when Mr Mackenzie fell into the sunken garden area. He is nineteen and employed by Moray Estate Development Limited as an apprentice forester. He had worked with Mr Mackenzie, whom he described as nice, friendly, with good knowledge, a few times before. This was the first time they had worked together on the ornamental hedges near the sunken garden. Mr Mackenzie had shown Mr McManus how to cut the hedges using the long reach hedge cutter. Mr Mackenzie would cut the hedges, and Mr McManus would 'do a few bits.' He was learning by watching how Mr Mackenzie did the task. Mr McManus knew that Mr Mackenzie had 'white finger' and should not have been using the hedge cutter. He had seen Mr Mackenzie using the hedge cutter eight to twelve times in the weeks prior to the accident. To get to the top of the hedges Mr Mackenzie used both the long reach hedge cutter and a step ladder. Mr Mackenzie did all the laddering work. Mr McManus described the ladder as an indoor ladder for flat ground. The ground surface, uneven grass, was not suitable for such a ladder. As shown in Crown Production three, the ladder was leaning back a bit, on a slight slope. It was the 'wrong ladder in the wrong place.' It could have been positioned away from the sunken flower

bed. The henchman platform was in a nearby trailer. Mr McManus had never seen Mr Mackenzie use the henchman.

[85] Mr McManus was aware of the Moray Estate Development Limited health and safety manual. He had a copy at home. He assumed Mr Mackenzie had read it. They did not discuss it. There was no discussion about dynamic risk assessment. Mr McManus said that he would not have used the step ladder for that task. Mr Mackenzie used the step ladder, so Mr McManus 'was not going to say anything.'

[86] The pair were working together on the morning of 17 September 2024 cutting topiary hedges near a sunken flower bed at the estate. Mr Mackenzie was using the long reach hedge cutter whilst on the step ladders. At around 1100, as Mr Mckenzie was descending from the step ladders, he misjudged the bottom step, lost his footing, and stumbled backwards into the sunken garden, about 600mm below the level the pair had been working at. Mr McManus had been using a hand and foot to stabilise the ladder, albeit he could not recall if the ladder was stable as Mr Mackenzie descended. Mr Mackenzie fell onto a bamboo cane in the flower bed. Mr McManus could see that the cane had penetrated Mr Mackenzie's clothing. Mr Mackenzie pulled the cane out and got up. He seemed a little winded and sat down for a while whilst Mr McManus worked on another hedge. The pair then continued working on other hedges until lunchtime. Mr Mackenzie did not seem to be in pain or discomfort. Mr Mackenzie went home for lunch and, after he returned, the pair continued working. Neither Mr Mackenzie nor Mr McManus reported the accident.

[87] Andrew William Howard is the Managing Director for Moray Estates, a post which he has held for twenty-three years. He has overall responsibility for managing estate business and ultimate responsibility for health and safety matters, albeit not on a day-to-day basis. The estate clerk of works leads on day-to-day health and safety matters. Each departmental head has responsibility for adherence to health and safety rules. The estate also employs external advisers, Greens of Haddington, to provide advice, updates, and reviews of practices. He had known Mr Mackenzie since Mr Howard began working at Moray estate in 2001. He described Mr Mackenzie as an extremely capable, diligent, and productive employee. Mr Mackenzie was employed as the groundsman at the estate. He was in a department of one. 'Traditionally, formally' Mr Mackenzie reported to Mr Howard. Most of the coordination of tasks was done through the estate Woodlands manager, Mr Clinch. Mr Mackenzie had been heading towards retirement, and others were being trained to assist him and take on his role. He was very experienced. He did not need supervision regarding his role. If Mr Mackenzie needed assistance in conducting a task, he could call upon the estate Woodlands Manager to provide support.

[88] Mr Mackenzie had been diagnosed with carpal tunnel syndrome and from April 2024 was unfit to work with vibrating tools. Mr Howard understood that Mr Mackenzie had been verbally instructed not to use vibrating tools such as trimmers or chainsaws, though he had not dealt with it personally. Mr Mackenzie's condition was well known. He had previously been subject to a limitation regime, but the latest assessment was serious enough to ask him not to use such equipment at all. The estate had people with

him to do the hedge cutting as he could not do it himself. Mr Mackenzie was to train the forestry team. His understanding was that Mr Mackenzie had being showing junior staff how to cut the hedges for two or three years. For two or three months before the accident he was unable to use the vibrating equipment at all. There was no expectation that Mr Mackenzie would use vibrating equipment at the time of the accident. A day or two before the accident Mr Howard had become aware that Mr Mackenzie had been using a strimmer. He had reminded Mr Mackenzie of the Hand Arm Vibration System (HAVS) assessment and asked him not to do so.

[89] Mr Howard became aware of Mr Mackenzie's accident two days after it occurred. The accident had not been reported by Mr Mackenzie or Mr McManus.

[90] The step ladder was not the appropriate equipment for the task. His signed Police Scotland statement dated 23 September 2024 contained an error, when it stated that 'It would be normal practice for them to do the hedge trimming whilst on the ladder'. Mr Howard said he had not been aware of Mr Mackenzie using the step ladder until after the accident. The estate had a henchman platform for working at height on relatively unstable ground. He had never seen Mr Mackenzie use the henchman. He was surprised and disappointed that Mr Mackenzie had never used the henchman. When asked about Moray Estates Production 4, the estate staff health and safety manual at page 43, which states in relation to the henchman that 'only trained persons to erect platform', Mr Howard stated that Mr Mackenzie had not been trained. Whatever equipment was used, it needed to be at a safe location. Locating it near the edge of the sunken garden was a risk. The location could not be described as either firm or level.

[91] The assessment of risk had been Mr Mackenzie's responsibility, as the senior member of staff at the location where the task was being conducted. When asked if he had ever observed or conducted a spot check whilst Mr Mackenzie was working, Mr Howard stated that Mr Mackenzie did not need supervision in his role. He was very experienced. Health and safety supervision would be done by the Woodlands manager.

[92] Mr Mackenzie was a perfectionist. He did things to a high standard. Mr Howard was not surprised that Mr Mackenzie had wanted to finish the hedge off perfectly, but he was surprised about the extent to which he was doing so.

[93] Mr Howard said it was clear that there had been inadequate supervision of Mr Mackenzie's adherence to the estate's health and safety arrangements. It was possible that had been contributed to by a lack of clarity as to who was responsible for supervising Mr Mackenzie. It was accepted that not enforcing the limitation, and thereafter ban, on use of vibrating equipment had been a process failure. Breaches had not been identified nor addressed quickly enough. The one conversation reminding Mr Mackenzie not to use vibrating equipment had not been documented.

[94] Moray Estates had learned lessons regarding the use of appropriate equipment for working at height, canes had been removed from the gardens and rules around accident reporting had been tightened, including an expectation that witnesses to incidents would be required to report. Green of Haddington had been consulted as external experts. Work processes had been found to be appropriate, but there was a need to ensure they were adhered to. Clearer supervision arrangements were now in

place, step ladders had been removed, and health and safety training had been reenforced.

[95] Craig James McNaught is the Clerk of Works at Moray Estates. He is also the health and safety coordinator between departments. He holds both NEBOSH and ISOH qualifications, facilitated by Moray Estates. Health and safety is secondary to his main role as clerk of works. He relays health and safety updates and changes typically provided by Greens of Haddington. He does not provide health and safety advice. Greens of Haddington have the final say on the management of health and safety advice and instruction. He coordinates contact with Greens by staff who have questions and facilitates periodic visits to the estate by Greens, at which changes to health and safety manuals or risk assessments are considered. Such visits take place on average every five years. Greens are also contacted ad hoc about specific queries.

[96] Mr McNaught would often see Mr Mackenzie in passing on the estate and engage in professional and personal chats. Mr Mackenzie would be in touch regarding any health and safety changes he wished to discuss. Mr Mackenzie was in the Gardens Avenues and Policy Department, a department of one, which worked closely with the Forestry Department. Mr Mackenzie's supervisors were Ben Clinch, the Forestry Manager and Andrew Howard, the Managing Director. They would set out Mr Mackenzie's tasks a month in advance. Each department has its own health and safety manual. Mr Mackenzie had his own hard copy. He also had a copy emailed to him in January 2023. At the time of the accident the manuals were in the process of

being updated. Mr Mackenzie had had an opportunity to contribute to proposed changes to the manual.

[97] Mrs Mackenzie told Mr McNaught about Mr Mackenzie's accident a couple of days after it had happened. The estate has an accident reporting system to be completed by the person who had the accident or their line manager once notified. The accident book had not been filled out in relation to Mr Mackenzie's fall. The system has since changed and it has been reiterated to staff that line managers must be notified as soon as possible after an accident and that anyone can fill in the accident book, provided that the line manager is told.

[98] Mr McNaught was aware that Mr Mackenzie had been diagnosed with Hand Arms Vibration Syndrome in 2022 but had no details. He became aware through Ben Clinch that Mr Mackenzie's use of vibrating equipment was to be limited and that two colleagues were to be trained on the use of vibrating machines. Mr McNaught did not observe Mr Mackenzie using vibrating equipment thereafter. He accepted that the estate had had two years to get colleagues trained whilst Mr Mackenzie was subject to restricted use of the vibrating equipment. He was not aware of the advice to stop use of vibrating equipment given in April 2024. However, it was his understanding that Mr Mackenzie had stopped using such equipment prior to his death.

[99] Mr McNaught explained that the henchman is a small working platform. It was his understanding that no formal training was required for its use. It is sturdier than a traditional step ladder. It is more stable than a step ladder if two hands are required for a job.

[100] Benjamin Kendall Clinch is the Woodlands Manager at Moray Estates, a role he has held for 13 years. He holds a degree in forestry and woodland management and is a member of the Institute of Chartered Foresters. As such he is required to maintain and submit annual CPD records to the Institute.

[101] Mr Clinch would see Mr Mackenzie once or twice per week, at which time they would discuss work and machinery. Sometimes Mr Mackenzie would work alongside the forestry team. Otherwise, Mr Mackenzie worked alone in the Gardens Department. He denied being Mr Mackenzie's line manager. Mr Howard was Mr Mackenzie's line manager. Mr Howard was also Mr Clinch's line manager.

[102] Mr Mackenzie had worked on the estate for forty years. He was very capable. He did not need 'massive supervision.' He was an experienced team manager. Mr Mackenzie's successor, who is new to the role, is supervised by Mr Clinch.

[103] Mr Clinch was aware of Mr Mackenzie's carpal tunnel syndrome diagnosis. Mr Mackenzie had had surgery, which was partially successful. The diagnosis had been around four years before the accident. Mr Mackenzie had been told to limit his use of vibrating tools. Mr Mackenzie had contemplated retirement but had decided to stay on another year. Mr Mackenzie was then advised by occupational health to stop using vibrating tools altogether. Members of the forestry team were to be mentored by Mr Mackenzie to take on the roles involving use of the vibrating hedge trimming equipment. The staff involved were already experienced in the use of chainsaws, which was in many ways a less safe operation than hedge cutting. The main difference was

"neatness." They were in their second season of learning when the accident occurred, having begun in Autumn 2023.

[104] Mr Mackenzie was a perfectionist. Staff had reported seeing Mr Mackenzie use hedge cutters to Mr Clinch. Mr Clinch had alerted Mr Howard. Mr Clinch thought Mr Mackenzie had been asked not to cut hedges about three days before the accident.

[105] Mr Clinch had not been involved in hedge cutting at the estate prior to Mr Mackenzie's death. Since then, he had been involved in risk assessing the site of the accident. The henchman was suitable for hedge cutting at the site, if appropriately placed. It was not necessary to have the henchman at the sunken garden side of the hedges to do the job. The job could be completed by placing the henchman at a different side of the hedges. Appropriate placement of the henchman was now part of the instruction for the job at that site. In Mr Clinch's opinion, a step ladder was not suitable for the task.

[106] I turn now to the evidence given by the various witnesses employed by NHS Grampian. I do not intend to rehearse the evidence given by the witnesses in so far as it related to the detail of the various examinations carried out, medications provided or timing of decisions, all of which was consistent with the detailed Joint Minute agreed by parties and is reflected in the Findings in Fact. Such oral evidence as was given in relation to those matters formed a natural context of each witness's evidence in relation to a key focus for the Inquiry, which related to the reasonableness of the clinical decision making.

[107] Gavin Tunnard is a Consultant at Accident and Emergency Department, Dr Gray's Hospital, Elgin. He has been an A&E consultant since 2015 and been based at Elgin since 2017. Mr Mackenzie presented at the hospital two days after the accident, having not realised the severity of his injury. Mr Mackenzie explained that he had fallen or tripped onto a garden cane. He had removed the cane and not thought much of the incident but had suffered increasing pain over time. He presented with a significant wound to the scrotum. Identifying the wound track was a priority. A CT scan showed the wound tracking from the scrotum to just outside the abdomen. The CT scan did not reveal the presence of a torn jeans fragment which was discovered later during surgery. This was not surprising given the limitations of CT scans. Blood tests showed raised inflammatory markers. He considered that the wound would require debridement, given the injury had been sustained in a garden and was therefore more prone to bacterial contamination, albeit he readily accepted that such surgery was not his area of expertise. Mr Mackenzie was transferred to Aberdeen Royal Infirmary Urology Department for specialist care. Mr Tunnard agreed that he would defer to specialists at ARI regarding the appropriate treatment plan.

[108] James Fergus Donaldson is a Consultant Urological surgeon at Aberdeen Royal Infirmary. He is presently the surgical training lead. Given his specialty, he has seen cases of necrotising fasciitis relatively frequently, at least once per month. Once or twice a year a case would present whereby debridement was required.

[109] He assessed Mr Mackenzie on arrival at ARI. Mr Donaldson's injury was unusual. He had never seen a patient with an injury to this depth who had not

sustained an injury to a vital organ which required surgery. Mr Mackenzie's National Early Warning Score was one, given he had a heart rate of ninety-five. Ninety-five was in the normal range, especially for a patient who was older, obese, and diabetic. There were no signs of crepitation, no foul smell, no dusky purple skin, nor was there any significant pain, all of which are signs of necrotising fasciitis. There was tenderness and redness consistent with cellulitis. Following a discussion with colleagues, he decided, exercising his clinical judgement, to treat Mr Mackenzie with broad spectrum antibiotics Co-amoxicillin, Metronidazole and Gentamicin. He decided that surgery was not in Mr Mackenzie's best interests. Mr Mackenzie was diabetic and obese. Surgery would result in a thirty-centimetre open wound, with an elevated risk of secondary infection, and an impact on mobility given the wound proximity to the hip, with a consequent increase in the risk of clotting. At best, surgery would result in a lengthy period of recovery and at worst would result in death. The fact that the wound was contaminated with a fragment of Mr Mackenzie's jeans was not known. Blood test results were consistent with a cellulitis diagnosis and not suggestive of necrotising fasciitis. A CT scan showed no gas tracking along the fascia, it was linear, from scrotum to near the abdomen. There was no evidence of organ damage.

[110] The NHS Grampian guidance protocol for antibiotic treatment of necrotising fasciitis at ARI involves the use of Flucloxacillin, Benzylpenicillin, Gentamicin and Clindamycin.

[111] Mr Donaldson handed over Mr Mackenzie's care to Robert Mason during the morning ward round on 20 September 2024. He was glad of another consultant's

opinion on such a rare case. On examination, there remained no signs specific to necrotising fasciitis. Both consultants agreed that surgery was not required at that time.

[112] Mr Donaldson attended the monthly Morbidity/Mortality meeting at ARI on 19 November 2024 at which Mr Mackenzie's case was discussed. The record of that meeting (Grampian Health Board Production 2) stated –

> "- Discussion regarding whether earlier intervention would have been of benefit.
>
> - No foul-smelling necrosis and no signs of necrotising fasciitis. Lactate 1.5 at presentation.
>
> - Outcome: As this was a dirty injury, further wide spectrum antibiotics should have been commenced and possibly earlier intervention may have been of benefit"

Mr Donaldson felt that the record of the meeting did not reflect the breadth of what had been an open and candid discussion. He had come away from the meeting feeling reassured. He had not checked the minutes when they were circulated. When he saw the minutes for the purposes of preparing his witness statement he had been confused and disappointed that they did not represent what was discussed at the meeting. The comment about antibiotics was not factually correct. Wide spectrum antibiotics had been administered. He commented that the minutes had been taken by a Urology Physician Associate, not a doctor.

[113] If he had known about the clothing fragment that would have changed the treatment plan. With the benefit of hindsight, he wholeheartedly agreed that earlier surgical intervention would have benefited Mr Mackenzie, given the significance of the contamination due to the presence of the fragment of jeans in the wound, as opposed to

a small amount of organic material, which he would expect the immune system to deal with.

[114] Robert Mason is a Consultant Urological Surgeon at Aberdeen Royal Infirmary. He first became involved in Mr Mackenzie's care at the morning ward handover meeting with Mr Donaldson on 20 September 2024. Mr Mackenzie was the priority case. In over twenty years as a consultant Mr Mackenzie's injury was unique in his experience. There had been a discussion regarding whether debridement was necessary. The decision boiled down to whether they were treating cellulitis or necrotising fasciitis. The latter may be sensitive to antibiotics, but surgery may be required. Surgery carried risks, not least of secondary infection. It was necessary to exercise clinical judgement, using knowledge and experience, to make an informed decision. Whilst necrotising fasciitis was a recognised risk, no signs were present when Mr Mackenzie was examined by Mr Mason. Mr Mackenzie's blood SATS were 95%, his pulse was ninety-five, resulting in NEWS 2, not particularly significant. There were no signs of deterioration. There was no sign of crepitus or other indicators of necrotising fasciitis. There was no evidence of a need for debridement. Debridement would have resulted in a 25-to-30 centimetre open wound, with a risk of secondary infection, the potential need for a skin graft. The passage of time since the accident causing the injury was also a consideration, making a successful surgical intervention to remove any contaminated tissue less likely. The working diagnosis remained a trauma caused haematoma and cellulitis, to be treated with antibiotics.

[115] By 1717 on 20 September Mr Mackenzie was not feeling as well. His pulse was raised. The swollen tissue around his pubic area was mildly worse. There had been a subtle change. Surgery was now being considered. Following further tests, which showed bloods had worsened, in discussion with Mr Parnaby, general surgeon, they decided to operate. There remained no signs of crepitus. The decision to operate was taken at 1720. Mr Mackenzie was designated as a Category B, which meant that the target was for surgery to take place within two hours.

[116] The operation did not take place until 2305. Both Mr Mason and Mr Parnaby were engaged in another emergency operation. By then, Mr Mackenzie's condition had deteriorated, a wide necrotic area having spread across the bilateral scrotal and penile areas. During the surgery, a small portion of denim was recovered from the wound tract. The infected skin was removed. The abdominal area was opened and found to be healthy.

[117] Mr Mackenzie's presentation had been unusual for three reasons.

a) His wound was from a blunt object, but penetrating.

b) No body cavities had been penetrated; the wound was relatively superficial.

c) There had been a delay in his presentation at hospital.

Based on the information available at the time, Mr Mason considered that the clinical decision to treat with broad spectrum antibiotics was reasonable. Applying hindsight, he maintained that the treatment plan was reasonable, but that, if anything, having decided to operate at 1720, given what was now known about Mr Mackenzie's

deterioration in the intervening hours, the operation should have been conducted earlier than 2305. It was difficult to say whether earlier surgery would have saved Mr Mackenzie. The infection may have spread already, given the delay in his admission. Mr Mason simply did not know.

[118] Mr Mason chairs the monthly morbidity and mortality meeting, which provides practitioners with an opportunity to reflect and learn. At the time, minutes were taken by a physician associate and thereafter sent to Mr Mason to check. Such a meeting was held on 19 November 2024. Mr Mackenzie's case was discussed. The discussion focussed on the unusual nature of the injury and whether earlier intervention might have changed the outcome. Mr Mason did not recall there being any criticism of the decision making in Mr Mackenzie's case. Conservative management with antibiotics had been reasonable. There had been no obvious signs of necrotising fasciitis such as crepitus, foul smell, or high lactate. Hindsight had played a significant part in the discussion at the meeting. By then it was known that a piece of denim was recovered from the wound tract. In hindsight, if it had been suspected that Mr Mackenzie had developed necrotising fasciitis, the NHS Grampian Guidance on antibiotics relating to necrotising fasciitis would have been followed.

[119] The meeting notes could have been clearer. Mr Mason reflected that he was at court without the reflections of a fit for purpose meeting. The reflections themselves had been good, but how they were recorded was not as he would have wished. A new system had been introduced following the first day of evidence to the Inquiry, whereby a summary slide is populated on screen during the meeting, in accordance with an

approach recommended by the Royal College of Surgeons. All attendees can see the record whilst the discussion is still fresh in their minds. This approach had proved to be more robust and led to better governance. The Inquiry into Mr Mackenzie's death had prompted this change.

[120] The six-hour delay between the decision to operate and the operation commencing was potentially significant. Not meeting the two-hour target was a system failure. He accepted that it was striking that this was not reflected anywhere in the Morbidity and Mortality meeting minutes.

[121] The key learning point from Mr Mackenzie's case was that when presented with a blunt, penetrating, and dirty wound, clinicians should follow the local health boards recommended protocol on the treatment of necrotising fasciitis. With the benefit of hindsight Mr Mason would advise his team to administer necrotising fasciitis specific antibiotics when a patient was at risk of developing the condition.

[122] Carol Ann McCorgray is a physician associate at Grampian Health Board, having been appointed to the role in 2018. Physician associates are healthcare professionals who work under the supervision of doctors as part of a team and assist in a variety of ways including with patient clinical care, robotic theatres, data collection, and student teaching.

[123] Ms McCorgray was not involved in Mr Mackenzie's care. She attends the monthly morbidity and mortality meetings. The main purpose of the meeting is to secure learning. Part of her role is to assist in identifying cases for discussion at the meeting. The Chair, Mr Mason, leads the discussion at the meeting. Ms McCorgray's

role included documenting the outcome of the discussion. The record is not a verbatim transcript. It is a concise summary of the discussion, agreed conclusions and actions. If in any doubt about what is to be recorded, she seeks clarification from the chair during the meeting. Hindsight plays a large part in the discussions. She had been taking minutes of these meetings since early 2021. She had never had any complaints about her minute taking. No one has expressed any view or criticism about how Mr Mackenzie's case was noted.

[124] Ms McCorgray attended and took minutes at the meeting in November 2024. She recalled the discussion covered four broad areas.

> First, the delayed presentation at Dr Gray's hospital.
>
> Second, that the clinical signs of necrotising fasciitis were not concerning.
>
> Third, during surgery, a piece of fabric was recovered from the wound tract.
>
> Fourth, whether applying the necrotising fasciitis antibiotic protocol might have been beneficial.

She could not recall specifics.

[125] The reference in the minute to earlier intervention related to a discussion that surgery at an earlier stage may have discovered the jeans fragment sooner. The reference to further wide spectrum antibiotics related to the use of antibiotics in accordance with the NHS Grampian guidance on necrotising fasciitis.

[126] Per usual practice, the draft minutes were shared with the Chair, Mr Mason, for comment before circulation. No amendments had been made to the notes relating to Mr Mackenzie's case by the Chair. The minutes were thereafter circulated.

[127] Following the first day of evidence at the FAI, the system for recording discussions at the monthly meetings had been changed. A new approach, recommended by the Royal College of Surgeons, had been introduced, whereby a slide, which everyone attending can see, is populated during the meeting.

[128] I found all the witnesses to be credible and reliable. Mr Howard and Mr Mason were particularly helpful, sharing their candid views on the learning points arising from Mr Mackenzie's untimely death.

Submissions

[129] All parties' submissions on findings in respect of section 26 (a) to (d) were in similar terms and reflected the evidence agreed in the Joint Minute and the eye witness evidence of Ben McManus.

[130] The Crown's written submissions lodged prior to the hearing on 23 March 2026 explored whether the Court should make findings in terms of section 26(2)(e) of the Act. In particular, the Crown considered potential reasonable precautions relating to the use and correct positioning of the henchman ladder, whether the Grampian Health Board Necrotising fasciitis protocol ought to have been initiated sooner and thirdly, whether surgical debridement could have been performed sooner.

[131] In relation to the use and positioning of a henchman ladder on suitable and stable ground, the Crown position in written submissions was that there was no evidence to establish that, had such measures been followed, the fall resulting in death might reasonably have been avoided. The reasonable precaution test set out in the Act

was not met. Moray Estates Development Limited adopted a similar position and invited the court to find that there were no precautions which could reasonably have been taken that might realistically have resulted in the death being avoided.

[132] During a discussion at the submissions hearing in relation to the evidence led, both the Crown and Moray Estates reflected on their written submissions and adopted modified positions. In addition, neither the Crown nor Moray Developments written submissions addressed the evidence in relation to the instruction given to Mr Mackenzie, after he had received medical advice, that he was to train other staff to cut the hedges. To ensure that definitive submissions of both the Crown and Moray Estates Developments Limited were before the court, I allowed further time for revised written submissions. I also invited Grampian Health Board to set out details of further record keeping changes which had been put in place because of learning during the Inquiry.

[133] The Crown reconsidered its position in light of the discussions and adopted a revised view in supplementary written submissions, as far as it related to events at Moray Estate.

[134] Turning first to the ladder and its placement, the Crown now noted that Mr Howard stated that the ladder could have been placed in a different position around the hedges and on more suitable ground. Mr Mackenzie had placed the ladder between the hedge and the drop to the sunken flower bed, leaving limited space for him to regain his footing when he stumbled. When asked what risk assessments he would undertake when performing a similar task, Mr Clinch stated that he would inspect the ground

conditions and ensure the use of a henchman ladder, as the small ladder used by Mr Mackenzie was not suitable for the task. The henchman was designed to be used on rough terrain and for cutting hedges. Mr Mackenzie was a man of undoubted skill and experience, but he had not adhered to the required safety procedures as detailed in the Moray Estate's health and safety 2024 manual and failed to conduct the relevant risk assessments before undertaking the work on the day of the accident. The Crown now adopted the position that, had Mr Mackenzie followed the safety measures available to him on the day, specifically the positioning of the henchman on more suitable and stable ground, away from the sunken garden, the falling accident, and the subsequent fatal injury, might realistically have been avoided.

[135] The Crown submitted that although some evidence was led of forward planning within Moray Estate in respect of training additional staff and accommodating Mr Mackenzie's known medical condition, there was no written procedure governing how such training should be undertaken, nor any documented system identifying how risk assessments were to be completed or supervised by those replacing or supporting him. Mr Howard had accepted a number of process failures: the absence of a clear system for monitoring the use of vibrating machinery in the context of Mr Mackenzie's physical limitations; delays in identifying breaches of safe working practice; the lack of a contemporaneous risk assessment specific to the task undertaken; and supervision which, at the material time, was not sufficiently robust to ensure compliance with the safety measures set out in the estate's Health and Safety Manual.

[136] The Crown submitted that, applying the two-stage test under Section 26(2)(e) of the 2016 Act, the precautions of ensuring that appropriate equipment was used, that the henchman was positioned on suitable and stable ground, and that adequate supervision was in place, were precautions which could reasonably have been taken at the material time and which might realistically have avoided the accident and the resulting death. The Crown submitted that these precautions should have been implemented, and that their absence constituted a failure to take reasonable precautions capable of preventing the fatal outcome.

[137] Turning to Section 26 (2)(f), the Crown submitted that the standard to be applied in these contexts was outlined in Sheriff Kearney's determination dated 17 January 1986, in the death of James McAlpine, referred to at paragraph 8 – 99 of the 3rd edition of Sudden Deaths and Fatal Accident Inquiries by Iain Carmichael. Sheriff Kearney observed:

> "in deciding whether to make any determination (under section 6(1)(d)5) as to the defects if any in any system of working which contributed to the death or any accident resulting in the death, the court must, as a precondition to making any such recommendation, be satisfied that the defect in question did in fact cause or contributed to the death."

[138] Considering Mr Howard's evidence, the Crown submitted that the supervisory arrangements at Moray Estate were structurally inadequate and constituted a defect in the system of working which contributed to the accident. The evidence established that notwithstanding the existence of written health and safety materials and risk-assessment guidance within the Estate's documentation, these were not embedded in practice through any structured or proactive supervisory framework. Mr Mackenzie was not

subject to any meaningful supervision in relation to work at height, equipment selection, or the completion of task-specific risk assessments. This absence of supervision was not an isolated lapse but formed part of an accepted practice whereby Mr Mackenzie, due to his years of experience, was effectively left to manage his own tasks without oversight or verification of compliance with the Moray Estate's own health and safety procedures. As a result, there was no mechanism to ensure that he did not use vibrating machinery contrary to instruction, that an appropriate risk assessment was conducted for the hedge-cutting task, or that the ladder was positioned on suitable and stable ground. This reliance on informal self-supervision amounted to a systemic failure, and that the lack of a structured supervisory framework materially contributed to the circumstances leading to the accident.

[139] The Crown would have recommended that Moray Estate review and formalise its supervisory arrangements to ensure that reliance on the experience or seniority of individual workers does not substitute for structured oversight. The evidence heard during the hearing demonstrated that the recent re-organisation of the Moray Estate resulted in the Gardener reporting directly to Mr Clinch within the Forestry Team. This change highlighted the importance of having clear lines of supervision and making sure everyone knew who is responsible for overseeing such work. Considering those changes, no recommendations were required.

[140] Moray Estates Developments Limited supplementary submissions addressed use and placement of the step ladder, supervision, and training for succession.

[141] In relation to the step ladder, Moray Estates revised position was that the accident arose because of the wrong equipment being used in the wrong place. Had the ladder been positioned in an appropriate position, it was more likely than not that Mr Mackenzie would not have fallen into the sunken garden impaling himself on the garden cane to his injury. Where the ladder had been positioned left little margin for error. Had the henchman been set up in the same place, the accident may still have occurred. The base of the henchman was in fact larger than the A-frame of the step ladder. The positioning of the equipment played a key role in how matters unfolded. Had the equipment been positioned 90 degrees to the left or right then it was unlikely that Mr Mackenzie would have stumbled back into the sunken garden, rather he would have either fallen or stumbled on grass which would have been directly behind him. Mr Mackenzie as the more senior of the pair undertaking the work on the day of the incident should have performed a dynamic risk assessment which would have identified that the undulating terrain and the sunken garden presented a potential hazard which should have precluded the ladder from being set up in the position it was. Mr Mackenzie did not identify the positioning of the ladder as being a potential hazard. Mr Mackenzie had used the hedge trimmer where the accident occurred on numerous occasions without incident. The task was now conducted from a different place using different equipment. Moray Estates Development Ltd Production 5 depicted how the henchman should be set up to trim the top of the topiary trees. The Moray Estate Health and Safety Manual, Production 4 stated at page 23 that "ladders are only safe when they rest on a firm and level surface". Further, page 17 of the same production confirmed

hedge trimming should "be done from suitable scaffold such as a henchman platform" where work at height is required.

[142] Turning to supervision, Moray Estates now noted that Mr Howard had accepted in his evidence that there was inadequate supervision of Mr Mackenzie's adherence to health and safety arrangements. The evidence of Mr Howard and Mr Clinch suggested that supervision of Mr Mackenzie was somewhat of a grey area. The Estate diagram set out that Mr Howard was Mr Mackenzie's line manager, however there was evidence that Mr Clinch supervised Mr Mackenzie. Mr Clinch had denied that proposition in evidence. It was accepted that there was little supervision of Mr Mackenzie. He had held his role with the Estate for around forty years. He was somewhat of a perfectionist. He was a respected member of staff. It was submitted that this perhaps led to him being allowed free reign with little to no supervision. Moray Estates Developments Limited now accepted that a reasonable precaution which may have been taken under section 26(2)(e) was a more robust and adequate level of supervision. Had this been implemented, it may have been identified that (i) Mr Mackenzie was using vibrating tools when he should not have been; and (ii) he was not following the guidance in the Health & Safety Staff Manual, particularly regarding his apparent failure to use a henchman at any point when performing hedge cutting.

[143] In respect of training of forestry department employees and succession planning, Moray Estates noted that Mr Mackenzie was diagnosed with Hand Arm Vibration Syndrome in around April 2022. Two members of the Forestry Department had been asked to assist Mr Mackenzie as and when required. The training of these individuals

did not commence until April 2024. There was no written training regime in place. Training was being provided on an ad hoc basis as and when Mr Mackenzie required assistance. It was accepted that a reasonable precaution that could have been taken under section 26(2)(e) would have been to have meetings with the Mr Mackenzie regarding how the training of the members of the Forestry Department was to be implemented together with a detailed succession plan. There had been no evidence as to how it was anticipated that Mr Mackenzie should have trained the member of the Forestry Department, considering the medical advice. Had a suitable and sufficient training plan been put into place that confirmed how training was to be provided then it was accepted that the accident may have been prevented.

[144] Any defects in terms of supervision of Mr Mackenzie or lack thereof had been rectified following the re-structure of the Estate which effectively brings the Gardener under the wing of the Forestry Department. The individual who has been employed in Mr Mackenzie's role is supervised by Mr Clinch.

[145] I turn now to the submissions of the Crown and Grampian Health Board in relation to Mr Mackenzie's treatment at Aberdeen Royal Infirmary (ARI).

[146] The Crown helpfully identified two potential steps which might be considered reasonable precautions in respect of Mr Mackenzie's treatment for the purposes of section 26 (2)(e)-

a) Whether, following admission to Aberdeen Royal Infirmary, the Necrotizing Fasciitis protocol could have been initiated sooner.

b) Whether, following admission to Aberdeen Royal Infirmary, surgical debridement could have been performed sooner.

[147] Dealing with the potential initiation of the Necrotising Fasciitis protocol on ARI admission, the Crown recalled Mr Donaldson's evidence that, at the time of Mr Mackenzie's admission to ARI on 19 September 2024, the clinical picture was not diagnostic of necrotising fasciitis, but rather consistent with surgical emphysema and cellulitis following penetrating trauma. Notwithstanding the absence of specific clinical signs of necrotising fasciitis, Mr Mackenzie was recognised as being at risk of developing that condition due to his diabetes, obesity, and the nature of the injury. Mr Donaldson's management plan therefore included the administration of broad-spectrum intravenous antibiotics from an early stage. Mr Mackenzie had already been commenced on IV co-amoxiclav at Dr Gray's Hospital prior to transfer, and that, following arrival at ARI, the antibiotic regimen was broadened further by the addition of metronidazole and gentamicin. Mr Donaldson considered this antibiotic coverage to be appropriate for the working diagnosis of cellulitis, while also providing coverage in the event of early or evolving necrotising infection. The broad-spectrum antibiotics common to use for trauma to the scrotum were prescribed to Mr Mackenzie. The wound swab results showed that the sample was sensitive to all the antibiotics prescribed. Mr Donaldson's view was that, in the absence of clinical, biochemical, and radiological features specific to necrotising fasciitis at that time, immediate treatment under a full necrotising fasciitis surgical protocol was not indicated. However, he had

emphasised that the antibiotic therapy instituted was intentionally wide-spectrum and combined with close clinical observation to detect any deterioration.

[148] Mr Mason broadly concurred with Mr Donaldson's assessment when he assumed care on the morning of 20 September 2024. He agreed that there were no clear clinical signs of necrotising fasciitis at that stage and that continued conservative management with intravenous antibiotics was appropriate, alongside close monitoring and repeated CT imaging. In his addendum dated 27 November 2025, Mr Mason had reflected on the subsequent development of necrotising fasciitis and addressed antibiotic management in that context. He acknowledged that, with the benefit of hindsight and knowledge of wound contamination, earlier escalation to a necrotising fasciitis–specific antibiotic regimen may have been advantageous. However, he distinguished hindsight analysis from real-time decision-making.

[149] Based on the information available at admission and during early inpatient care at ARI, the antibiotic therapy given was reasonable and proportionate to the presenting features. The difficulty lay in the early differentiation between cellulitis with surgical emphysema and evolving necrotising fasciitis, a condition which can initially present with non-specific signs. Mr Mason had accepted that Mr Mackenzie could have been treated with different antibiotics on admission. Given Mr Mackenzie subsequently developed necrotising fasciitis, it would not have been unreasonable to initiate the necrotising fasciitis antibiotics protocol earlier on admission, as a precautionary measure.

[150] Mr Mason further clarified that, with the benefit of hindsight, he would likely advise his team in future similar cases to administer Necrotising Fasciitis specific antibiotics when a patient is at risk of developing the condition. Mr Mason had said the key learning point was that, when presented with a blunt, penetrating, and dirty wound, clinicians should follow the local health board's recommended protocol of the treatment for necrotising fasciitis.

[151] The Crown submitted that it was not the function of this Inquiry to criticise doctors who, on the evidence, had acted reasonably at the relevant time. Reference was made to *Dr. Karen Duncan v The Lord Advocate, [2025] CSIH27*, paragraph 59, per Lord Pentland:

> "In short, the fact that one particular reasonable precaution was taken by a doctor (or anyone else) does not mean that a different precaution may not also have been one that could reasonably have been taken. This approach is entirely consistent with the policy of the 2016 Act: to identify how matters could reasonably have been handled differently in ways which might realistically have avoided the death."

[152] Neither doctor, both experienced specialists in their field, considered that the clinical presentations on admission were such as to mandate the initiation of necrotising fasciitis specific antibiotics at that time. Mr Mason's retrospective views were cautious, he indicated possibility rather than certainty that earlier necrotising fasciitis antibiotics could have helped. Necrotising Fasciitis was a risk not a diagnosed condition at the time.

[153] The Crown referred to Sheriff Williamson's determination in the *Inquiry into the death of John Yuill and Lamara Bell ([2024] FAI 18, 10 April 2024)*:

> "In order to identify a precaution which, if taken, might realistically have avoided the accident or deaths it is not necessary to conclude that the precaution would in fact have avoided the accident or death, but that it might have. The test is one of possibility rather than probability, but the possibility must be real rather than remote or fanciful. The test is determined on the balance of probabilities."

[154] Early necrotising fasciitis antibiotics could reasonably have been administered. Clinicians could reasonably consider administering necrotising fasciitis specific antibiotics if necrotising fasciitis is a risk. Given the risk factors, it was reasonable to initiate the necrotising fasciitis protocol earlier than occurred. However, in assessing whether doing so might have resulted in Mr Mackenzie's death being avoided, this required realistic possibility and not speculation. The antibiotics given to Mr Mackenzie on admission at ARI on 19 September 2024 were broad and partially overlapping with necrotising fasciitis coverage. The cornerstone of treatment in necrotising fasciitis is surgical debridement, not antibiotics alone. Both doctors regarded Mr Mackenzie's initial presentation as non-specific for necrotising fasciitis. While it could reasonably have been considered to initiate the necrotising fasciitis-specific antibiotic protocol on admission, in light of the clinical information available at the time and the views of both Mr Donaldson and Mr Mason, there was insufficient evidence to conclude that such an intervention might realistically have prevented the death. Necrotising fasciitis was not clearly suspected on admission, and the antibiotic regimen given was broad and appropriate to the presenting clinical picture. The more critical determinants in necrotising fasciitis outcomes related to rapid clinical recognition and surgical intervention, rather than antibiotic timing alone. The reasonable precaution test had not been met.

[155] Turning to earlier surgical intervention, the Crown noted Mr Donaldson's view that early surgical exploration was not indicated during the time he cared for Mr Mackenzie between the evening of 19 September 2024 and the morning of 20 September 2024 and that conservative management with close monitoring was appropriate.

[156] Clinical examination had shown no signs specific to necrotising fasciitis: no crepitus, no necrotic or ischaemic skin, no foul "dishwater" discharge, no disproportionate pain. Mr Mackenzie was systemically stable, with reassuring NEWS scores, normal lactate, normal renal function, and no metabolic acidosis. CT imaging showed gas confined to a narrow linear tract consistent with the trajectory of a penetrating garden cane, supporting surgical emphysema from trauma, rather than gas-forming infection. There was no evidence of bowel, bladder, urethral or testicular injury clinically or radiologically. There was no known retained foreign body and no information suggesting clothing loss or gross contamination. Early surgery would have required extensive debridement of a long tract, creating a large open wound requiring prolonged healing, with high morbidity and significant infection risk, particularly in an obese, poorly controlled diabetic patient.

[157] Mr Donaldson accepted that if the presence of a retained contaminated foreign body, the torn jeans fragment, had been known, earlier surgical exploration would likely have been appropriate. However, based on information available at the time, deferring surgery was reasonable and in Mr Mackenzie's best interests.

[158] Mr Mason had agreed with Mr Donaldson's initial conservative approach during the morning review on 20 September 2024. On joint review, Mr Mason found no clinical features specific to necrotising fasciitis. The erythema remained contained within marked boundaries. There was no crepitus, necrosis, foul discharge, or disproportionate pain at that stage. Like Mr Donaldson, Mr Mason judged that early surgical exploration would likely delay healing and carry significant risk, without clear evidence of benefit at that point. Mr Mason had requested urgent repeat imaging, CT cystogram, to reassess for evolving injury. He remained alert to the risk of necrotising fasciitis and acted promptly when the clinical picture later changed. When clear features of necrotising fasciitis developed in the late afternoon on 20 September 2024, Mr Mason promptly escalated to surgical debridement, involving general surgery, and extensive infected tissue was removed. A retained foreign body was identified and removed at surgery.

[159] In his later addendum and Mobility & Mortality (M&M) meeting discussions, Mr Mason acknowledged that necrotising fasciitis can have an insidious early phase. With hindsight, knowledge of a contaminated retained foreign body would have favoured earlier surgical intervention. However, Mr Mason's view was that, based on the clinical and radiological findings available during the initial reviews, conservative management was a reasonable and defensible decision. It was not possible to state with certainty that earlier surgery would have altered the outcome.

[160] Neither Mr Donaldson nor Mr Mason believed early surgical exploration was indicated initially, due to the absence of clinical features specific to necrotising fasciitis. They considered the risks of early extensive surgery to outweigh the perceived benefits

at that time. Both had emphasised the importance of broad-spectrum antibiotics, close observation, and reassessment, recognising Mr Mackenzie's elevated risk. They had accepted in hindsight that earlier surgery might have been appropriate had the torn piece of jeans been known.

[161] In his statement, Mr Mason had opined that it was possible that earlier intervention may have saved Mr Mackenzie's life. Performing a surgical debridement earlier may have reduced the chances of bacterial tissue infection leading to sepsis and organ failure, but on the other hand, with a two – day delay in presentation to hospital it was possible that even with earlier exploration, he may have succumbed to infection. Earlier surgical intervention may have provided opportunity for the wound to be cleaned, but it was possible that the bacteria had already spread to the adjacent tissue. Mr Mason had been unable to express any view as to the likelihood that earlier surgical intervention would have prevented the death, stating only that it was "hard to say" and that he did not know.

[162] For earlier surgical intervention to be said to have realistically avoided death, there would need to be evidence to demonstrate that, on the balance of probabilities, 1) earlier surgery would probably have prevented the development of necrotising infection or sepsis and 2) Mr Mackenzie's death was more likely than not avoidable had surgery occurred earlier. Mr Mason's evidence did not support either proposition. There was no clear or compelling evidence before the Inquiry to allow it to conclude that early surgical intervention might realistically have avoided Mr Mackenzie's death.

[163] The Crown submitted that, in relation to Mr Mackenzie's treatment at ARI, no findings should be made in respect of 26(2)(e) of the Act.

[164] Turning to section 26 (2)(f), the Crown referenced *Sheriff Kearney's determination dated 17 January 1986, in the death of James McAlpine, which are referred to at paragraph 8 – 99 of the third edition of Sudden Deaths and Fatal Accident Inquiries by Iain Carmichael*. Sheriff Kearney observed:

> "in deciding whether to make any determination (under section 6(1)(d)11) as to the defects if any in any system of working which contributed to the death or any accident resulting in the death, the court must, as a precondition to making any such recommendation, be satisfied that the defect in question did in fact cause or contributed to the death."

This had largely been replicated in section 26(2)(f) of the 2016 Act.

[165] Mr Donaldson and Mr Mason had exercised their independent, contemporaneous clinical judgment when treating Mr Mackenzie. The fact that necrotizing fasciitis later declared itself did not mean both doctors' management plans regarding antibiotics and surgical intervention were flawed. Hindsight knowledge of contamination and the discovery of the piece of torn jeans did not convert reasonable earlier clinical decisions into systemic failures. Given the two-day delay in presentation, even if an alternative system, for example, routine early exploration of all penetrating scrotal injuries, were hypothesised, the evidence did not establish causation. The evidence did not demonstrate that any different system of working would have had a realistic possibility of preventing death. Standing the absence of any causal connection between any issues relevant to Mr Mackenzie's death, the Crown did not invite any finding in terms of section 26(2)(f).

[166] The M&M meeting minute recorded that

> "As this was a dirty injury, further wide spectrum antibiotics should have been commenced, and possibly earlier intervention may have been benefit."

The Crown submitted that the M&M meeting did not record a finding that earlier surgical intervention should have occurred, nor that failure to operate early was an error. Instead, it recorded a retrospective observation, with the benefit of hindsight.

[167] One related issue was the accuracy of the M&M meeting minute taking. Mr Donaldson stated that the M&M meeting note did not reflect the depth of the discussion, and the recording only represented a small part of the discussion. Mr Donaldson recalled that during the meeting he was pleased to "identify nothing differently could have been done" and expressed his disappointment that "it's common in the NHS that the minute wasn't documented as accurately as possible."

[168] Mr Mason had explained that this problem has now been addressed and a new approach implemented, modelled on the Royal College of Surgeons template. The individual presenting each case will be responsible for completing a summary slide, include a categorisation of identified risks and whether any further investigations are required. This summary will be displayed during the meeting to enable all attendees to clearly view the key issues and discussion points. Any questions or actions can then be addressed in real time, ensuring accurate documentation.

[169] The Crown invited the court to make a finding in respect of the early initiation of Necrotising Fasciitis Protocol. The judgment in *Dr Karen Duncan* v *Lord Advocate*, supra, conferred wider power to

> "identify any precautions which could have been taken which might have avoided the death. The identification of such precautions, even though it may have been reasonable not to take them in the particular circumstances of the case, may serve to encourage reflection and re- evaluation of established practices and understandings by interested parties, such as government, local authorities, statutory bodies, regulators, professional bodies, training authorities and the like".

[170] The Inquiry had heard evidence that, in cases where necrotising fasciitis is a potential differential diagnosis, there may be merit in commencing antibiotics as prescribed in a local health board's Necrotising Fasciitis Protocol at an early stage. Mr Mason, reflecting on this case, had said he would encourage his team in future to consider earlier commencement of such antibiotics in similar clinical circumstances. The Crown suggested that Mr Mason's observation be recorded as a matter of learning and reflection, rather than criticism, and may assist in promoting understanding among interested parties of the challenges associated with early management of rare and insidious infections such as necrotising fasciitis.

[171] In respect of the potential impact of the delay in surgery, the court had heard evidence that, following a joint review by Mr Mason and Mr Craig Parnaby at approximately 1720 hours on 20 September 2024, a decision was taken to proceed to "emergency surgical exploration tonight". Mr Mackenzie's surgery was categorised as Category B, requiring commencement within 2 hours. The operation had commenced at 2305 hours on the same day. The evidence established that both Mr Mason and Mr Parnaby were concurrently engaged in another emergency surgical case which took clinical priority. There was no evidence before the court as to whether additional theatre capacity at ARI could have been made available to accommodate early surgery for

Mr Mackenzie. Mr Mason had acknowledged that there was a significant interval between the decision to operate and the commencement of surgery, and that Mr Mackenzie's condition deteriorated during this period. While the delay between decisions and operation raised a theoretical question as to resource availability, there was no evidence before the court to establish that the delay arose from systemic failure or that alternative arrangements were reasonably available. In the absence of such evidence, the Court could not draw any inference that the timing of surgery was attributable to a defect in resources or systems of working.

[172] Grampian Health Board submitted that there was no evidence that the actions of the surgical team were unreasonable based on the information which was available at the time. Both Mr Donaldson and Mr Mason had explained the clinical reasoning which underpinned their management of Mr Mackenzie. The actions of surgical staff were appropriate. The antibiotics which were administered, based on the working diagnosis at the time, were reasonable. The way the surgeons had exercised their contemporaneous clinical judgement, in weighing up the risks and benefits of surgical and conservative management based on the information available at the time, was also reasonable.

[173] Two overarching propositions emerged from the evidence of Mr Donaldson and Mr Mason.

[174] First, applying hindsight, the decision to operate could have been taken earlier. That was because it became known that the wound was contaminated with a piece of denim material. The operation would have been a wound exploration and debridement.

[175] Secondly, applying hindsight, instead of prescribing to Mr Mackenzie a combination of Co-amoxicillin, Metronidazole and Gentamicin, Mr Mackenzie could reasonably have been prescribed antibiotics under the Board's necrotising fasciitis protocol, IV flucloxacillin 2g 6 hourly, IV Benzylpenicillin 2.4g 6 hourly, Gentamicin IV and IV Clindamycin 600mg – 1.2g – hourly.

[176] Mr Mason had agreed with a question from the bench that where a patient presents with a blunt, penetrating, and dirty wound it would be reasonable to follow the relevant necrotising fasciitis protocol.

[177] The Board accepted that both measures, in law, fell within the definition of "precaution." For a finding to be made under section 26(2)(e), however, there required to be established through evidence a causal connection between either of the two precautions and the death. There was no evidence before the inquiry that prescribing the antibiotics set out in the Board's necrotising fasciitis protocol might realistically have resulted in Mr Mackenzie's death being avoided. Indeed, such evidence as was led pointed away from a finding to that effect because the infection from which Mr Mackenzie was suffering was sensitive to two of the antibiotics which he was in fact prescribed on first culture, Co-amoxiclav and Gentamicin, and Metronidazole on prolonged incubation.

[178] Mr Mason had noted that surgery remains the cornerstone treatment for necrotising fasciitis. Mr Donaldson could not say whether the death would have been avoided with earlier surgical intervention. In his statement, Mr Mason noted the possibility that earlier intervention may have avoided the death. In evidence, he had

been asked to expand upon that. He noted that earlier surgical intervention may have provided an opportunity to clean the wound; however, even then, the bacteria may already have spread from the tract to the adjacent tissue which may have resulted in the same outcome. When asked about how he would quantify the chance, he had stated that he found it difficult to say with any certainty and that he honestly did not know.

[179] The Board submitted that there was insufficient evidence to conclude, for the purposes of the statutory test, that the death might realistically have been avoided with earlier intervention.

[180] In respect of section 26(2)(f): any defects in any system of working which contributed to the death or any accident resulting in the death, the Board submitted that decisions concerning the treatment of Mr Mackenzie, namely the choice of antibiotic and surgical versus conservative management, fell within the exercise of clinical judgement by the surgical staff rather than the system in which those clinicians operated. Any findings under this subsection required to relate to the system of working in place, rather than the decision making of individuals.

[181] After the decision to operate was taken, it took longer than 2 hours for surgery to commence. That exceeded the target for a Cat B operation. Mr Mason had explained that he and Mr Parnaby engaged in another emergency procedure at that time which required to be completed before Mr Mackenzie's surgery commenced. There was therefore a delay in undertaking surgery for Mr Mackenzie. Mr Mason's evidence was that questions of priority gave rise to resources issues. Mr Mason could not comment on theatre resources at the time.

[182] The Board submitted that the evidence did not support a finding that the delay in Mr Mackenzie's surgery being undertaken was due to a defect in the system of working instituted by the Board. Whilst Mr Mason suggested that on the M & M pro forma now being used the delay would be recorded as a system failure on the summary sheet, because the Cat. B target was not met; he explained that the operation had been delayed as he and Mr Parnaby engaged in another emergency case. He could not comment on the availability of theatre resources beyond that. The evidence heard at the inquiry did not support a finding that the Board's system operated defectively. Furthermore, the evidence at the inquiry did not support a finding that the delay in undertaking surgery, after the decision to operate had been made, caused or contributed to the death on the balance of probabilities. Like the Crown, the Board sought no finding under this head.

[183] The Board had considered the submission from the Crown about the earlier initiation of antibiotics under the necrotising fasciitis protocol. Whilst the Board submitted that the contemporaneous choice of antibiotic was reasonable, it agreed that as a matter of learning in hindsight Mr Mackenzie could reasonably have been prescribed antibiotics under the Board's necrotising fasciitis protocol, namely IV flucloxacillin 2g 6 hourly + IV Benzylpenicillin 2.4g 6 hourly + Gentamicin IV + IV Clindamycin 600mg – 1.2g – hourly, instead of Co-amoxicillin, Metronidazole and Gentamicin. The Board submitted that section 26(2)(g) would be the appropriate heading for any such finding as there did not require to be any causal connection between the precaution and the death.

[184] Similarly, applying the relevant statutory test, the Board accepted that in hindsight the decision to operate could reasonably have been taken earlier. Again, in the absence of any causal connection between the precaution and the death, the Board submitted that section 26(2)(g) would be the appropriate heading for any such finding.

[185] The Board agreed with the Crown submission that there was no evidence that the time which elapsed between the decision to undertake surgery and the commencement of surgery was due to any defect in the system operated by the Board.

[186] The inquiry had heard evidence about the difficulties involved in accurately capturing the depth of discussions held at the M & M meeting and clearly recording such learning as had been identified. Those difficulties had been encountered during the inquiry. Confusion had arisen on paper about the significance and meaning of the recorded outcome. Evidence heard at the inquiry provided further context to the minutes and suggested that the breadth and depth of the discussions about Mr Mackenzie's case at the meeting exceeded that which is suggested by the recorded outcome.

[187] Whilst the outcome identified that further wide spectrum antibiotics should have been commenced and earlier intervention may have been of benefit, that conclusion had been reached with the benefit of hindsight: Mr Mackenzie was suffering from a wound contaminated by a piece of clothing and that he developed necrotising fasciitis. The evidence was that the M & M team did not consider the standard of decision making to have been unreasonable based on the contemporaneous information. Such evidence as

was heard suggested that the antibiotics which were prescribed by Mr Donaldson were standard.

[188] The Board accepted that the way in which the outcomes have been recorded was not as clear as it ought to have been. The inquiry had brought that issue to light and the Board had already taken steps to remedy it. The system now provided greater clarity: those present at the meeting share collective responsibility for recording the outcomes and identifying learning by populating PowerPoint slides in real time. This new system prevented the burden being placed on a single member of the M & M group to both contribute to discussions and record notes which accurately reflect the breadth of discussions and properly capture the relevant learning. The new system also ensured that all members of the team were aware of the contents of the notes rather than relying upon the notes being proactively reviewed by the members of the group following their circulation after the meeting. The new system was based on recommendations from the Royal College of Surgeons which the Board submitted could reassure the Court about its underlying quality.

[189] The Board did not seek any findings concerning the M & M meeting. Nor did the Crown. However, if the court wished to record any learning identified in respect of the M & M meeting, the Board submitted that section 26(2)(g) was the appropriate head under which to do so.

[190] In its supplementary submission following the hearing of 23 March 2026, the Board developed its position in respect of the way in which the Cat. B target not being met was recorded in the M & M minute.

[191] The decision to operate on Mr Mackenzie had been taken at 1720 on 20 September 2024. The target time for surgery was two hours (i.e. a Cat. B surgery). After the decision was taken, Mr Mason and Mr Parnaby were both engaged in theatre in another emergency case which had to be completed prior to Mr Mackenzie's surgery commencing. Mr Mackenzie's surgery did not therefore commence within two hours of the decision to operate being taken. The M & M minute did not record that the Cat. B target time was not met.

[192] The Board accepted that it ought to have been recorded in the minute of the M & M discussions, that the Cat. B target time was not met. Mr Mason had identified that the Cat. B target time not being met would now be classified as a system factor failure under the new approach to recording.

[193] A system failure of this sort, a target time not being met, did not equate to the system in operation being defective for the purposes of section 26(2)(f) of the 2016 Act. The Board operated within a system of finite resources. There was no evidence that the delay arose due to a defective system. The evidence suggested that the delay arose due to competing clinical emergencies. Whilst the Board accepted that not meeting the target time would now be recorded at the M & M meeting as a system factor failure, the system which it operated was not defective. The Board did not seek any specific finding in respect of the delay in surgery. However, if the court wished to record that the target time for surgery was not met due to competing emergencies, the Board submitted that the appropriate head under which to do so would be section 26(2)(g) of the 2016 Act: any other facts relevant to the circumstances of the death.

[194] No recommendations were sought by the Board.

Discussion and conclusions

[195] I am grateful to parties for their constructive contributions to the Inquiry, particularly the supplementary submissions, which are a positive example of engagement in the inquisitorial nature of these proceedings.

[196] It is helpful to separate out consideration of events at Moray Estate and Aberdeen Royal Infirmary, given the different issues each presents.

[197] There is no doubt that, given his medical condition, Mr Mackenzie should not have been using a long reach hedge cutter that tragic day. Nor should he have been using the step ladder. The step ladder was the wrong piece of equipment for the job, partly because of the terrain, but also because the hedge cutter required the use of two hands. The step ladder was not placed on even, stable ground. The job could and should have been conducted using the henchman, placed on more stable ground, at a different angle to the hedges, away from the sunken garden. Such a precaution could reasonably have been taken and might realistically have resulted in the accident being avoided. A henchman was available in a nearby trailer. If Mr Mackenzie or anyone else using an appropriately placed ladder had stumbled or fallen, they would have done so onto grass, not down into the sunken garden. The choices of the ladder and its positioning were made by Mr Mackenzie alone.

[198] Mr Mackenzie had been given medical advice not to use vibrating machinery. He continued to do so in the days and weeks leading up to the accident. During that

period and, it would appear for a long time beforehand, Mr Mackenzie was subject to little or no supervision by his employers. He was largely left to his own devices. Even after hearing the evidence, it remains unclear who if anyone, was his supervisor. Had adequate supervision been in place, it would have been apparent that Mr Mackenzie continued to use vibrating machinery, against medical advice. It would have been apparent that he worked at height cutting hedges using the step ladder rather than the henchman on a regular basis. I have no doubt that the level of supervision was inadequate and that adequate supervision, had it been in place, might reasonably have resulted in the accident being avoided.

[199] Moray Estates Developments Limited expected Mr Mackenzie to train other employees in topiary. That expectation continued even when Mr Mackenzie was told not to use vibrating machinery. Moray Estates, in the knowledge of that medical advice, made no plan as to how the training was to be delivered safely without Mr Mackenzie using vibrating machinery. Had such a plan been in place Mr Mackenzie would not have been using the long reach hedge trimmer. He would not have been on the step ladder. The accident might reasonably have been avoided.

[200] The absence of such a plan is an acute example, symptomatic of the overwhelming evidence of a complete absence of supervision and oversight of Mr Mackenzie by his employers. It was accepted practice that Mr Mackenzie was left to his own devices most, if not all, of the time. That neither Mr Mackenzie or Mr McManus thought it necessary to report the incident is a further example of a lack of oversight to ensure compliance with health and safety requirements. The absence of structured

supervision or oversight in relation to health and safety compliance was not an isolated incident which manifested on the day of the accident, but rather an accepted practice over an extended period which amounted to a defect in the system of working which contributed to the accident.

[201] I am satisfied that Moray Estates Developments Limited has since taken appropriate steps to address the issues identified in relation to supervision of employees, appropriate use and proper placement of the henchman- and in relation to the reporting of incidents and, as such, I make no recommendations in respect of Moray Estates.

[202] Significant Inquiry time was spent in evidence in relation to Mr Mackenzie's treatment at Aberdeen Royal Infirmary, specifically whether the Grampian Health Board necrotising fasciitis antibiotic protocol should have been initiated and whether surgery should have been performed on admission.

[203] Much of the concern in relation to the Minutes of the M & M meeting held on 19 November 2024 arose because of their apparent contradiction with the recollections of those present, such as to require explanation and exploration. Based on the evidence led, I am satisfied that the meeting was conducted through the lens of hindsight, in the knowledge that Mr Mackenzie's wound was contaminated by the piece of jeans fabric. That crucial information was not available until the surgery. On admission and , indeed, earlier on the day Mr Mackenzie died, there were, per the evidence agreed in the joint minute, no clear clinical signs of necrotising fasciitis. Both Mr Mason and Mr Donaldson

exercised their clinical judgements based on the information known to them at the time. I am satisfied that their clinical decisions were reasonable.

[204] With the benefit of hindsight, knowing that Mr Mackenzie went on to develop necrotising fasciitis, it would not have been unreasonable to initiate the Grampian Health board necrotising fasciitis anti biotic protocol. Indeed, Mr Mason went as far as to say that, presented with a similar blunt, penetrating, dirty wound in the future, he would likely advise his team to initiate the protocol, based on a risk of necrotising fasciitis developing.

[205] However, I am not satisfied that there was sufficient evidence to allow me to conclude that prescribing such antibiotics per the protocol might realistically have resulted in the death being prevented. Mr Donaldson and Mr Mason simply could not say one way or another. The issue was further complicated by the evidence that the infection was sensitive to antibiotics which were prescribed.

[206] In relation to earlier surgical intervention, Mr Mason acknowledged that such action, if taken on admission, would have provided an opportunity to clean the wound and, in hindsight, to remove the piece of jeans cloth. However, he could not say what, if any chance that action may have had in avoiding Mr Mackenzie's death, given his late presentation at hospital, bacteria may already have spread. There is insufficient evidence to allow me to conclude that the death might realistically have been avoided by earlier surgical intervention.

[207] The two-hour surgical target was not met. The surgeons were engaged in another operation which had clinical priority. There was no evidence about the

availability of another surgical team or operating theatre. There was no evidence that the delay was a result of any defect on the Grampian Health Board system of working.

[208] In the absence of evidence of any causal connection between the precaution of initiating the necrotising fasciitis antibiotic protocol and death, I have not made a finding in that respect under section 26(2)(e). However, Grampian Health Board accepts that, to ensure learning is appropriately captured, the determination might include that Mr Mackenzie could reasonably have been prescribed antibiotics under the necrotising fasciitis protocol. Indeed, when asked what learning he would wish others to take from this Inquiry, Mr Mason indicated that, when presented with a blunt, penetrating, dirty wound, it would be reasonable for clinicians to consider prescribing antibiotics under their local health boards necrotising fasciitis protocol as a precaution. I have reflected that learning in my first finding under section 26(2)(g).

[209] The Inquiry would have benefitted from a clearer minute of the M & M meeting. The steps taken by Grampian Health board to improve the recording of such minutes are most welcome and are reflected in my second and third findings under section 26(2)(g) in relation to the Royal College of Surgeons approved system and the additional enhancement in relation to recording when surgical targets are not met.

Closing remarks

[210] In closing I join with the various solicitors and counsel in expressing my sincere condolences to the family and friends of Mr Mackenzie, whose loss is so clearly deeply felt by all.