Style Counsel

Learning through technology

When creating the Harley Street Academy for Advanced Endodontics in his west end surgery, incorporating the very best technology - to contrast with the heritage surroundings - was **Dr Richard Kahan's** focus, as he tells Ellie Seymour

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If your dental practice is based on Harley Street, London's most famous road in the city's packed medical hub, it's essential to offer a high standard of treatment in line with the competition, and stand out from the crowd – both elements specialist endodontic practitioner at his private practice and director of the Harley Street Academy for Advanced Endodontics, Dr Richard Kahan, has covered.

From his practice on the lower-ground floor of 99 Harley Street – a traditional listed Georgian townhouse building that plays host to several esteemed medical practitioners across its various floors – patients can expect high-quality bespoke services in endodontics carried out amid unique surroundings which boast a charming unique blend of contrasting features, such as wood paneling, old fireplaces and framed family photographs, alongside an impressive collection of state-of-the-art equipment, as well as some of Dr Kahan's own bespoke creations.

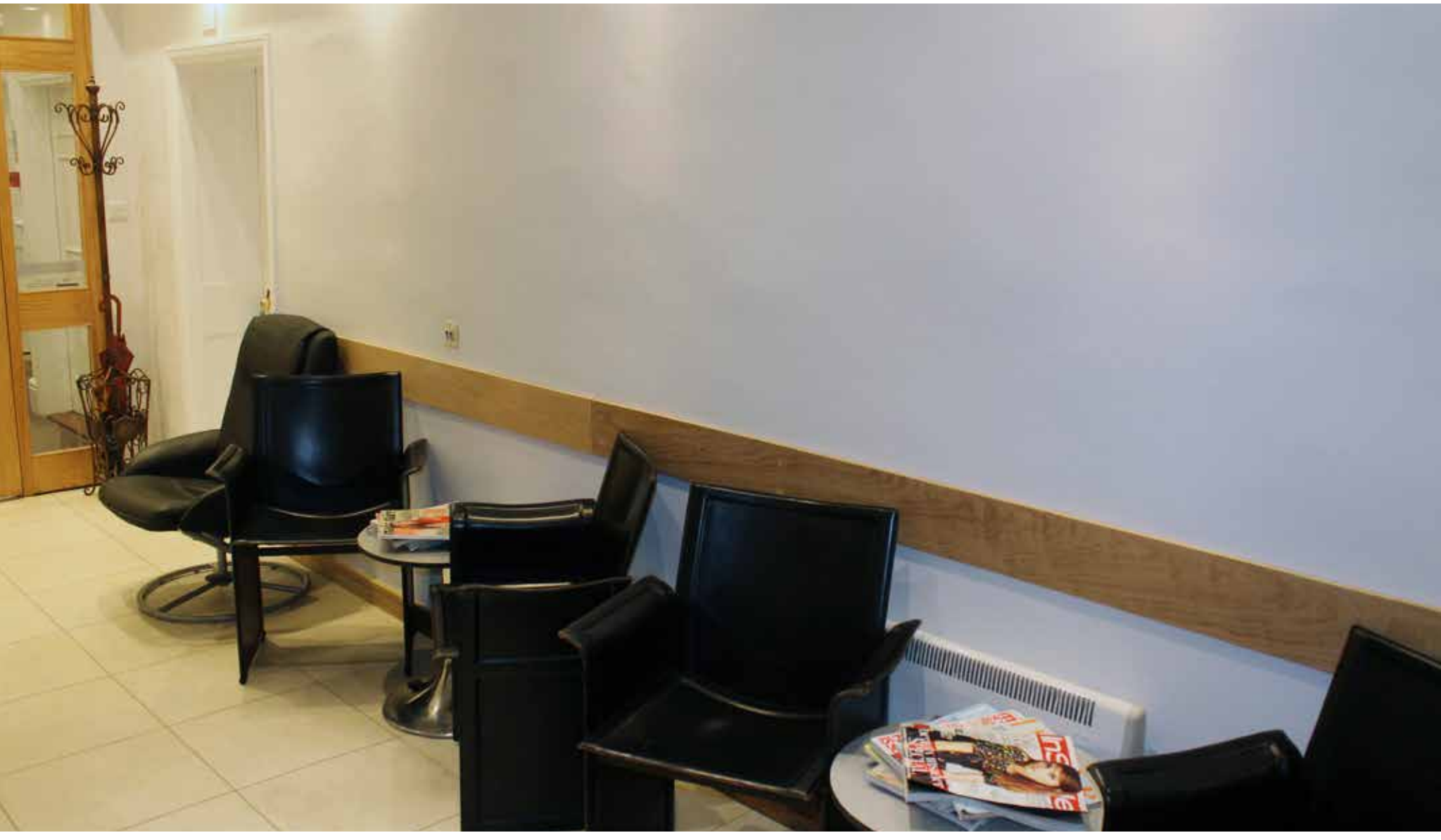
'LIKE THE REST OF THE PRACTICE, THE SEMINAR ROOM IS PACKED WITH HIGH-END TECHNOLOGY'

Fully refurbished in 2005 when Dr Kahan and his team first moved in to the building, the practice consists of two surgeries, a waiting area, reception area, office, decontamination-room, x-ray room and patient toilet. However, it's since seen some further enhancements, including improvements to the waiting area, and most significantly, the addition of the Harley Street Academy for Advanced Endodontics, a new world-class training facility where students benefit from small-group teaching and direct supervision to improve their endodontic techniques during Dr Kahan's three-module course, 'Get it right first time'.

Magnification is a key part of endodontics, so the surgery has a state-of-the-art system

The desk screen is Dr Kahan's own creation

The training room has eight fully equipped stations



This camera sends live pictures from the surgery to the training room

Dr Kahan's own design of 3D printed teeth ensures each training delegate has the same case to work on

SET UP FOR TEACHING

'A lot of the work I carry out involves correcting poor-quality treatment, so I'm passionate that specialists are trained to get it right first time and excel in what they do,' Dr Kahan says. To achieve this, teaching is based around watching practical demonstrations; a method he believes is essential to successful learning outcomes. This is also the reason he designed the training facility to incorporate a live video feed from his surgery to the new seminar room.

'My surgery's equipped with a Pan Zoom and Tilt extra HD ceiling camera linked to a 60-inch super HD monitor in the seminar room,' he says. 'I also use a Global operating microscope from DP Medical, a nursing scope and HD cameral feed, as well as a two-way audio link to the seminar room through VOIP, allowing students to ask me questions along the way.'

The actual build project to create the Harley Street Academy for Advanced Endodontics seminar room started on 7 April 2014 and finished on May 23 2014 – the day of Dr Kahan's first class – with Alan Tate of Grey Associates architects chosen to design the space. His brief was to design a room that would accommodate eight students and tutor across two tables, while working within the parameters of the building's listed status.

'The main things to consider, aside from working around the room's original features, such as the beautiful fireplace and alcove cupboards, were that the tables had to be tailor-made and hardwearing enough to accommodate various removable fittings,' says Tate.

'I also had to take into consideration that the space had to be available for meetings and for Dr Kahan's practice manager to use when courses were not running,' he adds. 'At the same time, his waiting area was to be refurbished and additional kit fitted to his surgery, including a video link to the training room.'

The project was fairly straightforward involving stripping out the room, decorating it as well as installing and designing the bespoke furniture – perhaps the biggest challenge due to the desired requirements and size.

'The tables are big, measuring 1800mm x 900mm each, and had to be designed to include a second level 140mm below the top to house the removable delivery units,' he says. 'The tops are made out of a 13mm solid laminate hardwearing material called Trespa, on to which the microscopes and phantom heads are clamped and incorporate access ports to allow the transfer of cables and airlines to the two floortraps,' he says. 'There's also a dedicated compressor set within soundproof housing in the light well outside while an aluminium lighting system from Flairlight suspended from a central beam and fed from the existing power source.'

Outside in the waiting area, work was less complex, with the same Karndean limestone-look floor fitted to link the two areas, new lighting installed to brighten the whole basement area and a few new pieces of furniture added. 'I managed to find six second-hand Matteograssi coach hide seats in black which were perfect in size, look and practicality – very easy to get out of! The round coffee tables were

‘INSTALLING AND DESIGNING THE BESPOKE FURNITURE IN THE TRAINING ROOM WAS PERHAPS THE BIGGEST CHALLENGE DUE TO THE DESIRED REQUIREMENTS AND SIZE

made of the same Trespa as the training tables,' he says.

TECHNOLOGY

Like the rest of the practice, the seminar room is packed with high-end technology, including eight table-mounted Global 3 step-operating microscopes; eight custom designed fully articulating i-phantom heads for operating microscope work from Navadha in India; a Modu-Pro Endo jaw from ACA Dental with a mounting system for apex locator use and radiography; a full HD desktop document and demonstration camera with X-ray backlight; a 70-inch wall-mounted 4K super HD monitor linked to Dr Kahan's surgery via an internal network; a Schick wired X-ray sensor; eight SAF Pro EndoStation motor delivery units from Redent Nova for rotary and reciprocating file systems and the self-adjusting file; four elements obturation units with System B and Automated heated GP extruder from SybronEndo; and finally eight Microsoft Surface Pro Tablets.

As well as his interest in state-of-the-art equipment, Dr Kahan's isn't averse to creating his own bespoke solutions if necessary. 'If I can't find something I need for a specific use, or something isn't quite right, I'm not averse to trying to create it myself,' he says, showing me a fake 3D printed tooth he designed and developed for use during training sessions.

'I scanned a tooth from a dry skull using CBCT,' he explains. 'I then converted the Dicom files into Stereolithographic files that can be manipulated and edited through 3D graphic design software. The canal systems are modified for teaching exercise and the teeth printed using the most advanced printing technology. This means each student has exactly the same challenging tooth to work on.'

Dr Kahan also enjoys combining traditional elements with cutting-edge modern features and technology to reach an ideal solution,' he says, directing me to take a seat at an old partners' desk he picked up from a second-hand furniture shop, which has been altered to incorporate a screen in the top. 'I couldn't quite find what I was looking for to buy, that would fit in with my surgery, so I created what I wanted myself by embedding a flat-screen monitor into the top of the desk, to allow me to go through treatment plans with patients. It works almost perfectly!'

Then there's the 60-inch HD monitor attached to a heavy-duty cantilevering hydraulic arm bolted securely to the ceiling. 'I know it might seem a bit Heath Robinson,' he says as he gives me a demonstration, and I watch as the screen unfolds neatly from the ceiling to a position ideal for patients who will be seated in the chair. 'But it fits the space and promotes patient education by allowing me to discuss 3D scans and X-rays,' he says.

Patients also have the option to watch their treatment carried out live, although this hasn't caught on yet. 'Funnily enough, there hasn't been much demand, but the option is there if someone ever were keen to see what I actually do! They usually opt to watch something from the online entertainment libraries, such as Netflix, iPlayer or Spotify through the Zeiss Cinemiser headset. I like to use comedy to relax them; particularly episodes of Curb Your Enthusiasm, as I'm a huge Larry David fan. Once the patients are happy, I'm happy.' ■

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